PULP & PAPER

DECEMBER 1955

U.S. Timber Future—and What Critics Say page 69

A New Paper Forecast page 70

SUP—Pro and Con page 76

AS ROMANS DO IT—Giant stacker stores peeled wood at Rome Kraft

Want to make a little size go further?

Try Liquid CYFOR® Fortified Rosin Size

Whether *Production* wants to make a size go further . . . or *Sales* calls for harder size specs, Liquid CYFOR is the answer.

Save Size and Money! You use less CYFOR Rosin Size than you would ordinary size—30% to 40% less. Or, if you wish, you can raise your hard size specs with Fortified CYFOR with no increase in amount of size.

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Los Angeles • Mobile • New York • Philadelphia • Portland, Ore. • Seattle

Mill Applications of Cyanamid's Paper Chemicals . . .

Wet Strength at near neutral pH's. That's the standard with a number of mills using PAREZ® Resin 607 (a MELOSTRENGTH® Resin). They have found that good wet strength may be obtained at higher pH's than with any other resin available. This plus the reliability of PAREZ 607 makes it "the" resin to use.

* * *

Improved color distribution in paperboard. A corrugated box manufacturer now uses ALWAX® 253-A Wax Size in formulating calender stain. By adding 2 quarts of ALWAX to 50 gallons of the color-water mixture, more even color distribution is effected as well as resulting in a smoother feel to the board.

* * *

Increased fines retention. When making wet-strength paper, one mill had been adding all of the alum at the beater. By adding only 25% at the beater and 75% at the fan pump, greater retention of fines with a resultant weight increase and color improvement was noted. Wet and dry tensile tests were maintained.

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of advanced design
papermaking machines.

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Worcester, Massachusetts
Paper Machine Builders Since 1837

West Coast Representative: Ray Smythe
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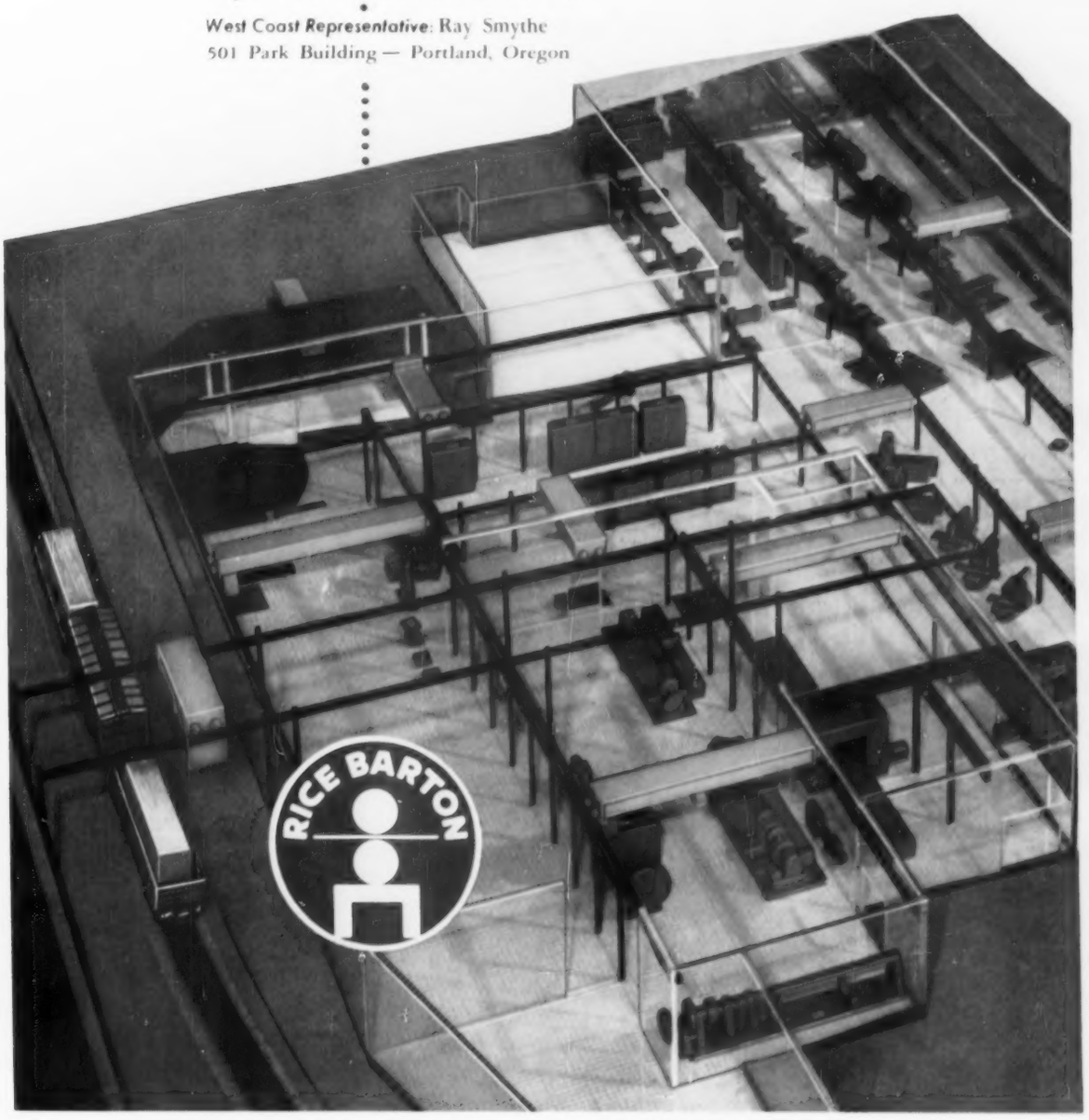

PORTION OF SCALE MACHINE TOOL LAYOUT USED IN PLANNING NEW FACILITIES

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MILLER FREEMAN PUBLICATIONS

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EDITORIAL PAGE

How Would You Like To Do Your Business on Page 1, Too?

Last summer book paper went up $5 a ton. Very few papers even mentioned the fact. Magazines did not subvert their own editorial pages to an outcry about it.

What a difference when newsprint increases of $3 to $5 a ton were announced—the first increases since June 15, 1952, despite the fact that wages of newsprint mill and woods workers have gone up every year, and all other costs have gone up.

Newsprint prices were increased $3, $4, $4.50 and $5, by different companies. Editor & Publisher called it a "crazy-quilt pattern," "confounding some of their best customers," etc. (Remember last time, when the raise was uniform—then the cry was "collusion! conspiracy!")

The self-serving outbursts of newspapers filled columns, even on the front pages, crowding out national and international news.

Senators and Congressmen forgot party differences, joined in the hue and cry, making it obvious how much they are beholden to the newspapers, especially with an election year coming up.

Newspapers pulled out all stop-gaps on "a threat to a free press." But, at the same time, they did not hesitate to take a dangerous whack at the free enterprise system by setting themselves up as judges of what profits others—not themselves, of course—should make.

They even got sort of mixed up on this. The Hearst papers came out blandly with a story they must have considered wholly unrelated, which bragged about their own all-time high record profits.

Big newspapers claimed they were alarmed for the little ones. But one newsprint company had been asked by a group of small publishers: "When are you going to raise newsprint prices, so we can raise our advertising rates?"

It reached such ridiculous heights that they were shouting for Mr. Dulles to file a protest in Ottawa!

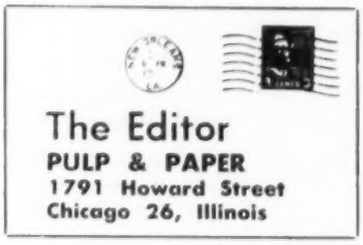
How would you like to have the privilege of using the front pages of newspapers free to further your own business deals? There is really no difference. The big newspapers did not hesitate to use Page 1 for their own bargaining purposes in a straight-out business deal, denying that space to legitimate news.

Will these same newspapers ever take as violent a stand against the forces that are causing inflation to continue?—the seemingly endless vicious circle of wage increases, more fringe benefits, cost increases, price increases to customers, and, finally, higher taxes.

Paper Containers to Rescue

During the recent hurricane-born storms in the east, International Paper Co.'s milk container plant at Philadelphia came to the rescue of the stricken populace at Stroudsburg, Pa., whose water supply had been knocked out.

Overnight, the I.P. plant turned out 10,000 special one-half gallon containers which were filled with water and transported to Stroudsburg.



READERS CORNER

No anonymous letters will be considered but names may be withheld if desired.

More Straw Pulp for Market

As a new subscriber to PULP & PAPER, we want to thank you for the very useful World Market Pulp Directory in your WORLD REVIEW NUMBER.

We were surprised to see that under the heading: "Straw, Bleached" there is only 1 mill mentioned. Holland now has 3 mills manufacturing straw pulp for market:

Coöp. Stroocartonfabriek "DE EENDRACHT," Appingedam
(Bleached *Monosulfite*, Straw Pulp, dry and wet)

N.V. Stroostoffabriek "PHOENIX," Veendam
(Bleached *Sulfate* Straw Pulp, dry)

N.V. Maatschappij tot Stroveredeling "SOVE," Arnhem
(Bleached *Celdecor-Pomilio* Straw Pulp, dry)

Present total production of these 3 mills is 45,000 metric tons per year. We should very much appreciate if you would be kind enough to mention in a next number of your magazine the other 2 Dutch straw pulpmills, DE EENDRACHT and SOVE. Our firm is acting as general agents of De Eendracht, Appingedam, for the sale of their straw pulp. The production capacity of "De Eendracht" is 20,000 metric tons per year. In order to improve the cleanliness of the pulp still further a great number of Bauer Centri-Cleaners have been installed lately.

K. TORENSTRA
Eduard Van Leer, Agents, PO Box 105, Amsterdam, The Netherlands.

"We Hear Music!"

Congratulations on the splendid coverage of the Pulp Consumers trip in both picture and text. It was an outstanding job and I have heard many people comment on the article.

THEODORE FOSTER II
Sec. & Treas., Foster Paper Co., Inc.

Every issue of PULP & PAPER is a treat because of the enterprise and originality which goes into it. A real highlight is the October issue article "What Historic Pulp Tour Accomplished."

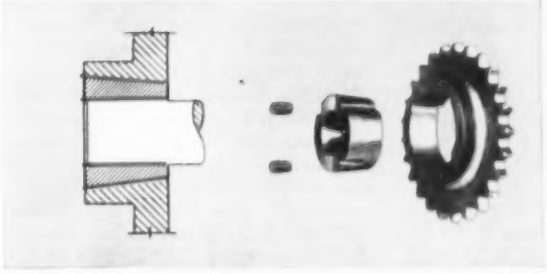
H. J. LAWLER,
Mgr., Paper Chemicals Dept., Monsanto Chemical Co., St. Louis

Your WORLD REVIEW NUMBER for 1955 has again proved a very useful reference volume. It is excellent in every way.

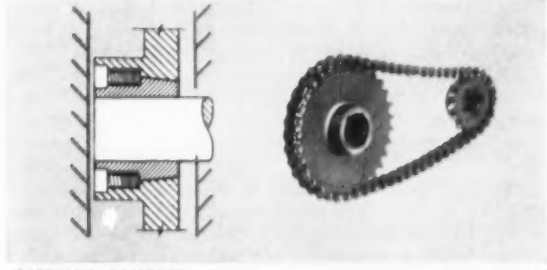
A. E. IRVINE
New Zealand Forest Products Ltd., Auckland, N.Z.

ORDERED today

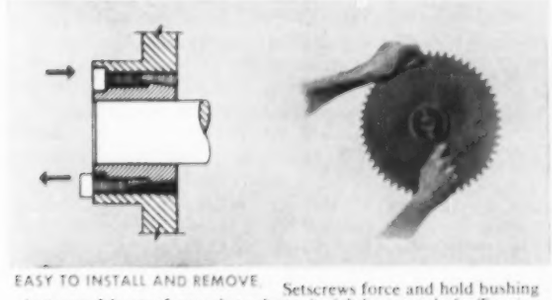
OPERATING today



FULL BEARING . . . POSITIVE GRIP. Contact extends the entire length between bushing and shaft, sprocket and bushing. Uniform compression on shaft provided by tapered construction.



SAFE AND COMPACT. Flush mounting requires minimum shaft space and bushing requires no more length than sprocket hub. No projecting flanges or bolts—all cap screws are fully recessed.



EASY TO INSTALL AND REMOVE. Setscrews force and hold bushing in tapered bore of sprocket, clamp it tightly onto shaft. Turning setscrew in removal hole quickly releases bushing.

LINK-BELT roller chain taper lock sprockets require no reboring or other machining

HERE's the simplest, most economical method of installing roller chain sprockets. Link-Belt roller chain taper lock sprockets are available for immediate delivery in every industrial area, in sizes from ½ to 2-in. pitch. Bushings are stocked in bore increments of 1/16 in. for shaft sizes from ½ to 4-in. diameters. No delay for sprockets to be rebored.

Teeth are precision cut in conformance with ASA standards, accurately spaced for smooth chain action. Uniform, true tooth surfaces provide full contact with chain rollers, assuring maximum operating life.

Your source is the Link-Belt factory branch store or authorized stock-carrying distributor. Be sure to ask for new Book 2649 listing all available stock sizes.

LINK-BELT

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LINK-BELT COMPANY: Executive Offices, 307 N. Michigan Ave., Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office: New York 7; Canada, Scarboro (Toronto 15); Australia, Marrickville, N.S.W.; South Africa, Springs. Representatives Throughout the World.

STRICTLY PERSONAL

MIDWEST NEWS

Stewart Back from Europe; Adrian Heads Mfg.

GLENN STEWART, advertising mgr., KVP Co., is back from Europe. He met the owner of a hand-made paper mill over there, but didn't see the mill. It was in England—they met in Switzerland. . . . **GEORGE LAW**, former Reliance Electric & Engineering Co. representative in Appleton, Wis., has moved to company headquarters in Cleveland, and will specialize in paper mill work in application engineering. **NICK BACHYNSKI**, formerly of Abitibi Power & Paper Co. Ltd., succeeded Mr. Law as Reliance's man in Appleton. . . . **ROY NELSON**, chief power engineer at Thilmany P & P, has retired and is succeeded by **HERB GEHRENS**, his former assistant. . . . **DR. ALAN ADRIAN** is new operations manager and **ANTON LIEBHAUSER** is new mill supt., both for Neenah Paper Co., Neenah, Wis. They succeeded to duties of **I. J. STAFFORD**, vice pres. for mfg., and **WALTER HANDLER**, former mill supt., who have retired. Mr. Stafford came to Neenah as gen. supt. in 1923, after being development engineer with American Writing Paper, and asst. supt. at Strathmore Paper. He graduated from Clarkson College. Mr. Handler began working at Neenah in 1907, age 16, as a fourth hand on a paper machine. In 48 years he never had a lost time accident. For 17 years he had been asst. supt. or supt. . . . **WILLIAM A. J. MITCHELL**, president of Central States Engineering, Appleton, Wis., and his wife, Ruth, have a baby daughter, Mary Ruth, born Oct. 11. . . . **WILLIAM PRASSE** is a new member of engineering dept., Wausau Paper Mills, Brokaw, Wis. . . . For Dorr-Oliver Inc., **GEORGE H. KOENITZER** has been transferred to the Central Sanitary Division in Cleveland from Stamford, Conn., and **WILLIAM M. SMITH** has been transferred to Central Filtration and Industrial Division in Cleveland from Chicago. Mr. Koenitzer is a U. of Wisconsin graduate and Mr. Smith is from V.P.I. and Harvard with an m.s. in business from Harvard. . . . **ROBERT STRAUSS** is newly named industrial engineer for Thilmany Pulp & Paper, which recently established an industrial engineering dept. . . . **MILFORD SPAULDING**, paper tester and first aid man, **LEROY KLEIN** and **DONALD ROBINSON**, Thilmany employes, were honored with engraved wrist watches for saving the life of a fellow employe from fatal shock by an electrical conduit. . . . **JOHN WOLLWAGE**, Kimberly-Clark asst. to vice president, and **JOHN STRANGE**, president of the Institute of Paper Chemistry, were honored at a dinner after 6 years service on the Appleton School Board. . . . **F. H. WERLING**, manager of all K-C mills, and **CLIFF WILLIAMS**, manager of the Atlas mill, took part in the Atlas (Wis.) mill's first dinner of its own for 25-Year workers. . . . **JAMES G. DUNLAP JR.**, recently discharged from the army, has joined Rhinelander Paper Co. as chemist. . . . **LEWIS E. PHENNER**, former president of International Cellucotton Products Co., **WILLIAM M. WRIGHT**, former v.p. of ICP, and **G. KENNETH CROWELL**, Chicago attorney and former ICP director, have been named as three additional directors of Kimberly-Clark, into which ICP was recently integrated. Mr. Crowell also became a member of K-C's executive committee and he and Mr. Wright became vice presidents of K-C. . . . **LEON F. YEAGER** is new asst. public relations mgr. for Charmin Paper Mills. He will succeed **ED MARINIK**, who joined another company, and will assist **RALPH C. PRATT**. Mr. Yeager was with the Wisconsin Rapids Tribune and graduated from the U. of Wisconsin. . . . **FRED REPULSKI** of St. Regis's Sartell, Minn., mill received a 10 point full cut diamond emblem for 45 years service, and **HILDEBRAND DE HAAN**, **TONY SOCHA** and **JOSEPH N. BELLAND**, all of the St. Regis Kalamazoo mill, received 8 point cut diamond emblems for 40 years service. . . . **HUGH SMITH**, ink dept. supervisor, **MAYNARD YOUNGS**, mfg office, and **CLAYTON WILKINS**, wax print dept., passed 25 years with KVP Co. . . . **DR. FRITZ BRAUNS**, the big, gruff German-born and educated scientist at the Institute, who was "Mr. Ligneen" to the nation and the world—as far as this industry is concerned—is retired. He was Institute research associate for 20 years. He left Appleton with his wife to join relatives in Victoria, B. C. . . . **MRS. ROY BEATTIE**, one of the twin Besaw sisters so well known to visitors to the Institute of Paper Chemistry, was recently married. She was Margaret Besaw and with her sister, Marquita, registered many an industry exec at the annual Appleton May conferences. . . . **CLAUDE SORG**, retired former gen. supt., Sorg Paper Co., Middletown, O., couldn't resist the call of the mill, and has joined Beckett Paper Co., Hamilton, O., as research and development consultant. . . . **PATRICK DALY**, for years Midwest sales rep. for Eastwood-Nealley Corp., is now also covering Virginia and part of North Carolina out of the Belleville, N. J., plant. . . . **DR. A. NEIL McLEOD** has joined The Institute of Paper Chemistry as research associate in economics. He will engage in teaching and research in economics and marketing as related to the paper industry. Dr. McLeod is a graduate of the University of Saskatchewan and received his m.s. and ph.d. degrees from Cornell. He also attended the Harvard School of Business. . . . **CURTIS L. BROWN** has been appointed bibliographer at the Institute. He studied at the University of Vienna and at George Washington University received b.s. and m.s. degrees. He had been abstractor and literary searcher with the National Research Council.

Continued on page 10

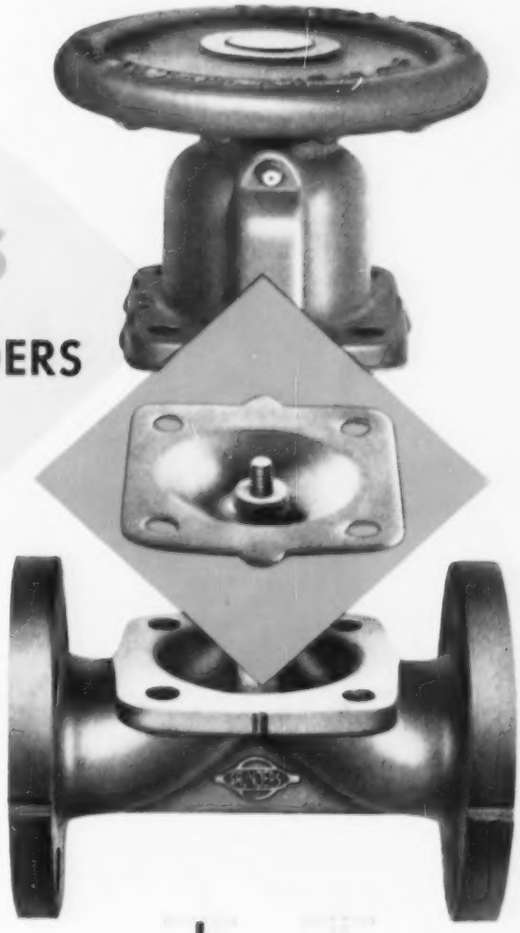
After 50 Years, He Sits Down!

ARTHUR M. SCHMALZ (seated), Prod. Mgr. of Thilmany Pulp & Paper Co., this year completed 50 years of service with that firm. Naturally, he gets the swivel chair, when he huddles over production problems with FRANK X. KREILING (left), Paper Mill Supt., and STEVE BAISCH (right), Design Engineer in Charge of Engineering. Art says he can't remember missing a paycheck with Thilmany except when on leave in the army in World War I. He also has three brothers with Thilmany. Art started in 1905 scraping screens at the old groundwood mill and acting as chauffeur for the late Pres. Wertheimer, father of R. S. Wertheimer, V.P. and Gen. Mgr., Longview Fibre Co.

Unaffected by all chemicals normally found in industry

Teflon Diaphragms

for GRINNELL-SAUNDERS DIAPHRAGM VALVES



Having valve trouble? Are your chemical services so tough that valves disintegrate? Grinnell-Saunders Diaphragm Valves with TEFLON* diaphragms may solve your problems.

Grinnell TEFLON diaphragms are made by a new and unique process which produces a better product of greater density, toughness and flex life. TEFLON offers a high degree of chemical inertness to all chemicals normally found in industry.

Grinnell-Saunders Diaphragm Valves are available with bodies of iron, bronze, stainless steel, cast steel, aluminum, Monel, Saran, Durimet; and with body linings of glass, lead, soft or hard rubber, neoprene, Saran. Diaphragm life depends on temperature, pressure, and frequency of operation. Your inquiries, which should be accompanied by complete service data, will receive prompt attention.

- Diaphragm lifts full height for streamlined flow in either direction
- Resilient diaphragm assures positive, leak-tight closure even with grit or scale in the line
- Diaphragm absolutely isolates working parts from fluid . . . sticking, clogging, contamination, corrosion eliminated
- Body, lining, and diaphragm materials to suit service
- Simple maintenance. Diaphragm can be replaced easily without removing valve from line. No packing glands to demand attention. No metal-to-metal seats to become damaged or wire-drawn

Registered Trade-Mark, E. I. du Pont de Nemours & Company, for its tetrafluoroethylene resin.

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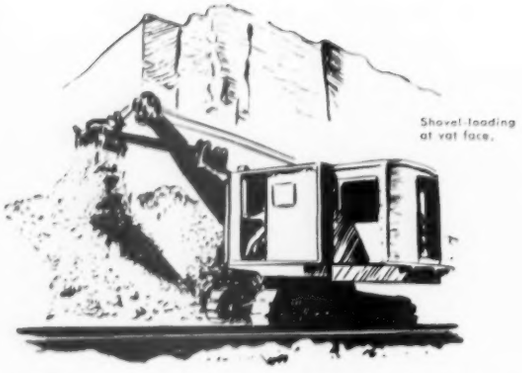
WHENEVER PIPING IS INVOLVED

Grinnell Company, Inc., Providence, Rhode Island • Coast-to-Coast Network of Branch Warehouses and Distributors

pipe and tube fittings • welding fittings • engineered pipe hangers and supports • Thermolier unit heaters • valves
Grinnell-Saunders diaphragm valves • pipe • prefabricated piping • plumbing and heating specialties • water works supplies
industrial supplies • Grinnell automatic sprinkler fire protection systems • Amco air conditioning systems



Shovel loading at vat face.

Crude Sulphur

for Industrial Use

from the properties of

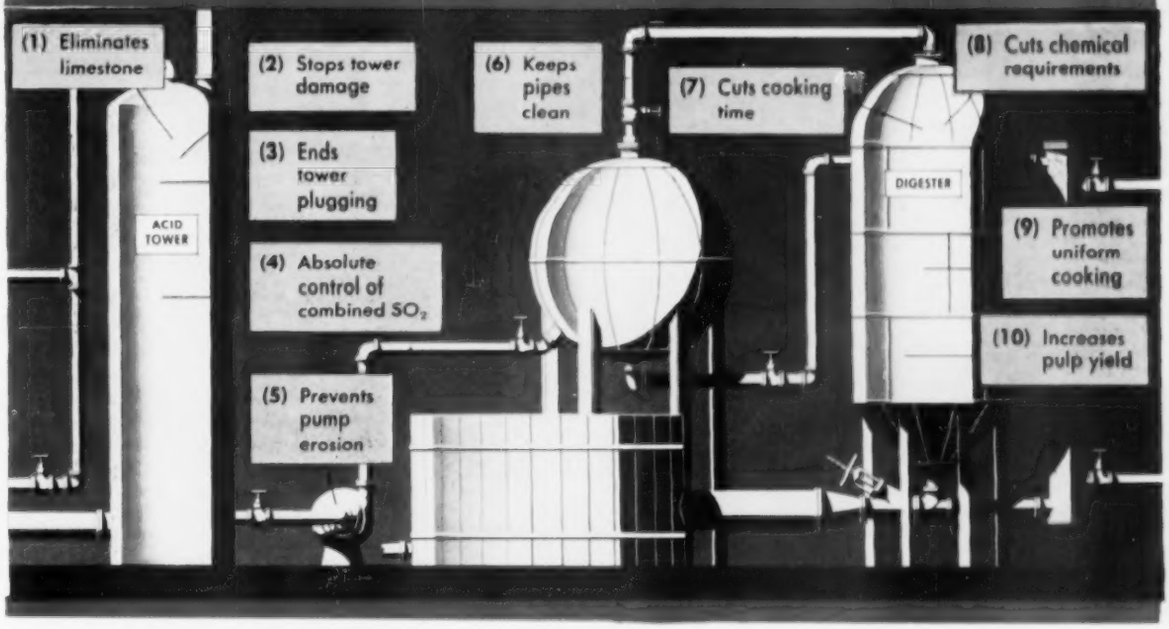
Texas Gulf Sulphur Co.

75 East 45th Street • New York 17, N. Y.

Producing Units

- NEWGULF, TEXAS
- MOSS BLUFF, TEXAS
- SPINDLETOP, TEXAS
- WORLAND, WYOMING

10 Ways Ammonium Bisulphite Pulping Can Help Increase Your Pulp Mill Profits:



Here's how Spencer Anhydrous Ammonia saves time, cuts costs and increases yields. Read how this quicker, cleaner, better method of pulping can benefit your mill:

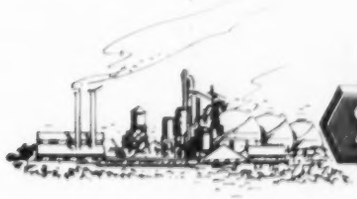
It is generally agreed that ammonium bisulphite pulping offers many advantages. Ten of these advantages are shown above. Now, let's look at what some of these advantages can mean to you:

In the first place, Spencer Anhydrous Ammonia ends the need for stone handling. This reduces labor costs and, at the same time, stops damage formerly caused by dumping stone into the acid tower.

Pipes are cleaned, not clogged, by ammonium bisulphite acid. With ammonia base, absolute control of combined SO_2 is accomplished by the mere twist of a valve.

Ammonia cooking liquor penetrates more rapidly, allowing shorter cooking cycles, lower temperatures and more uniform operation. Pulp yield per cord of wood is increased, and chemical requirements are decreased. Also, ammonium bisulphite is adaptable to the pulping of hardwoods.

Why not set up a test run, and prove in your own plant the benefits of this pulping process? Our Technical Service Staff will be glad to provide you with technical assistance. Just write: Technical Service Section, Spencer Chemical Company, Dwight Building, Kansas City 5, Missouri.



SPENCER SPENCER SPENCER®

AMERICA'S GROWING NAME IN CHEMICALS

STRICTLY PERSONAL

NORTHEAST NOTES

Kurtz Hanson Honored; Mitchell Heads New Lab

KURTZ M. HANSON, president, Champion-International Co., Lawrence, Mass., is new president of the Associated Industries of Massachusetts. He is also Massachusetts chairman of the Treasury Dept.'s savings bond advisory committee. . . . **C. L. PETERSON,** formerly divisional vice president, Brown Instruments Div., Minneapolis-Honeywell Regulator Co., is now vice president and general manager. . . . **DR. C. RICHARD CALKINS,** of Riegel Paper Corp.'s technical staff has been advanced to director of research of its 4 N. J. mills. . . . **EMMETT P. KAVANAUGH** has joined Stein, Hall & Co. as sales technician servicing the paper industry in Pa. and parts of Va., from its Philadelphia branch office. He has been with Bartgis Bros., Ilchester, Md., as coating supt. He's a grad of U. of Maryland, '42. . . . **R. LOGAN MITCHELL,** the former research supervisor for Rayonier at Shelton, Wash., will be research manager at its new eastern research division at Whippany, N. J., reporting to **DR. ARTHUR N. PARRETT,** v.p. in charge of research and development. . . . Institute grad, **DR. W. A. SCHENCK,** has been appointed assistant manager of the Riegelsville, Hughesville and Warren mills. He has a b.s. in chemistry from Montana State College and at APW Paper Co. was mill chemist. . . . **M. C. McKEOWN,** author of papers on water conditioning and recently technical director of the water treating division, Cochrane Corp., and manager of technical training, is now manager of its Philadelphia district sales office. . . . **JAMES HARROCK,** recently with Great Northern Paper Co., Millinocket, Me., is back at the Institute of Paper Chemistry. He and his wife, Jane, whom he met in their home town, Maplewood, N. J., live at 51 West Court, Appleton, Wis. They have two sons, one born at Millinocket, one at Appleton. . . . **LEROY McGUIGAN** has joined Magnus Chemical Co., Garwood, N. J., as manager of the paper mill division servicing the paper industry. . . . Orchard Paper Co.'s new division, Racquette River Paper Corp., Potsdam, N. Y., has a new paper mill superintendent, 6-ft., 200-pounder **LESLIE G. McCOWAN.** He's a pulp and paper grad of N. Y. State College of Forestry, has worked in paper coating at Eastman Kodak, Finch, Pruyn and Sorg Paper Co. . . . **FREDERIC C. FAULKNER,** a 4-year vet with Stanley Works, New Britain, Conn., has been promoted to sales rep. for steel strapping in part of Conn. . . . **ADRIAN L. KENNEDY,** finishing div., supt. at

Continued on page 14

Changes at Neenah Paper
I. J. (JACK) STAFFORD (left), who capped long industry career with American Writing, Strathmore Paper, and finally, 27 years at Neenah Paper, as the Vice Pres. of Mfg. at Neenah, has retired. Here he is shown with his chief, LEO O. SCHUBART (right), Pres. and Gen. Mgr. at Neenah. DR. ALAN ADRIAN succeeded Mr. Stafford with title Operations Mgr.


Season's Greetings
to all our friends at Home and Abroad
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JORGENSEN & WETTRE
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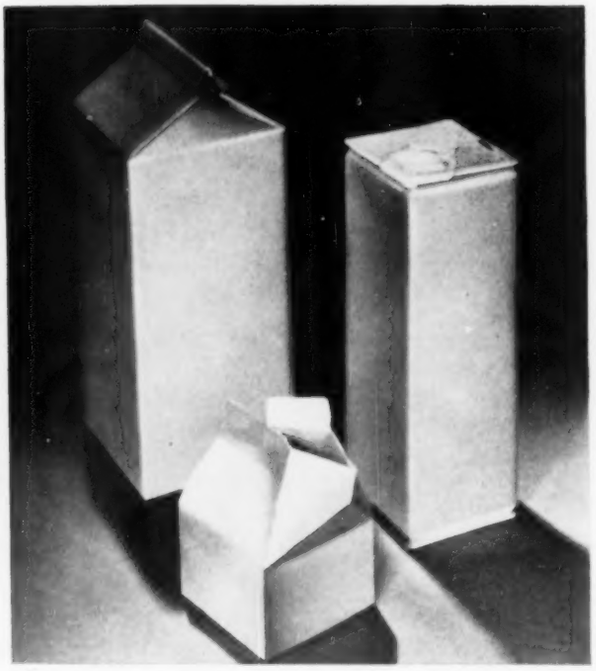
Rosemary Hoy

THE RIGHT GRADE FOR ANY SIZING JOB



MILK CARTONS Pexol® fortified size is the choice of many mills where a high degree of uniform sizing is required.

Whether you require fortified size or unfortified, pale or dark, paste or dry, there's a grade of Hercules rosin size to meet your sizing requirements at the lowest cost per ton of paper product.

This wide selection of sizing agents to meet the needs of the paper industry is only one good reason why so many mills rely on Hercules for all of their sizing requirements. Hercules' extensive research and service facilities are other typical Hercules "plus points". More than 40 years of service experience is at your disposal. The Hercules technical staff can help you meet your sizing specifications efficiently and economically; and Hercules' network of plants and storage facilities, strategically located from coast-to-coast, is your assurance of a dependable source of supply.

Your Hercules technical sales representative will be glad to discuss your sizing needs with you.

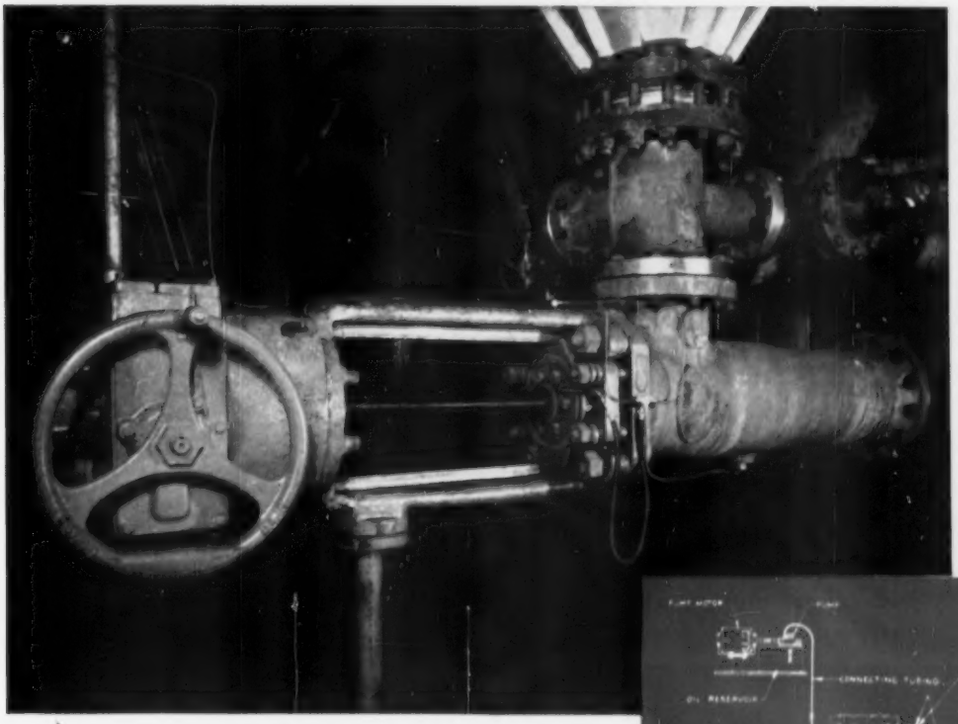
. . . OR MULTI-WALL BAGS Hercules unfortified sizes are used in many unbleached Kraft papers for the best combination of sizing efficiency and economy.

HERCULES® SIZE

SERVING YOU BETTER THRU BETTER SERVICE

Paper Makers Chemical Department
HERCULES POWDER COMPANY
965 King Street, Wilmington 99, Del.

YARWAY DIGESTER BLOW VALVES with AUTOMATIC LUBRICATION



One of a battery of Yarway Digester Blow Valves, motor-operated, with automatic lubricators, in a large Washington pulp mill.

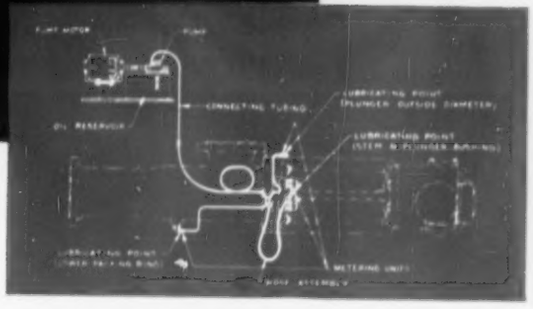


Diagram showing arrangement of Yarway Automatic Lubricator on Yarway Digester Blow Valve.

..help increase production, cut maintenance and save manpower

Automatic lubricators on Yarway Seatless Digester Blow Valves add new cost-saving and labor saving features to digester operation.

Push-button control of these valves also provides automatic lubrication of them at the *right* places . . . at the *right* time. Result—less maintenance, fewer production delays, release of manpower for other productive work.

Reports on low operating cost experiences from pulp mills using Yarway Digester Valves, are impressive, too. One large mill found the resultant *savings in operation and maintenance the first year more than paid for the cost of their new 4 Yarway Digester Valves.*

Yarway Seatless Digester Blow Valves are either motor or hydraulically operated. All are remote controlled—designed for clean, free discharge and tight shut-off.

For full information on Yarway Seatless Digester Blow Valves, write for Bulletin B-441. No obligation.

YARNALL-WARING COMPANY
103 Mermaid Ave., Philadelphia 18, Pa.
BRANCH OFFICES IN PRINCIPAL CITIES

YARWAY **DIGESTER BLOW VALVES**

STRICTLY PERSONAL

NORTHEAST NOTES, continued

Hammermill Paper Co., reports that assistant foreman **JAMES L. KARLE** has been upped to foreman of crew 9-A. Jim started with Hammermill in 1946 and since 1951 had been assistant foreman. . . . **BOB MARCH,** technical control director, Scott Paper Co. at Chester, recently returned from a 2-month executive training course at Cornell U. and proceeded to take 2nd place in Scott's annual golf tournament. . . . New general manager at Columbia Box Board's Walloomsac division is **HENRY J. "WHITEY" ABERNATHY** who comes from National Folding Box Co., New Haven, Conn., where he was mill manager. . . . **GERARD CHAPMAN,** formerly development engineer, Wood Conversion Co., Cloquet, Minn., has joined Columbia as chemist. He's an M. I. T. grad. . . . **BURLEIGH BARKER,** former chief cost accountant at Keyes Fibre Co., Waterville, Me., is now assistant controller, in addition to office manager. . . . **DWIGHT S. BRIGHAM,** chairman of Keyes Fibre, recently got his 25-year pin. **RALPH WESCOTT,** Keyes purchasing agent, received a Boston Art Directors Club Gold Medal Award. . . . **JAMES S. HENSEL** is new Northeastern logging engineer for American Pulpwood Assn., announces Pres. **L. J. FREEDMAN.** Mr. Hensel's future office was not decided, but Portland, Me., is considered. It is now at Gorham, Me. He has been assistant professor at N. Y. State Ranger School and has degrees in forestry from there, Michigan and Syracuse. . . . **GEORGE B. AMIDON,** Minnesota & Ontario Paper's director of forest management, was one of three nominees for presidency of the Society of American Foresters.

One Sells; Other Teaches

BILL CROSBY (left), is Pulp Sales Rep in the Eastern states for St. Regis. Born in Great Neck, Long Is., he graduated from Seton Hall U., in New Jersey, in 1952, was a Marines intelligence officer and joined St. Regis technical training program at Jacksonville about a year ago.

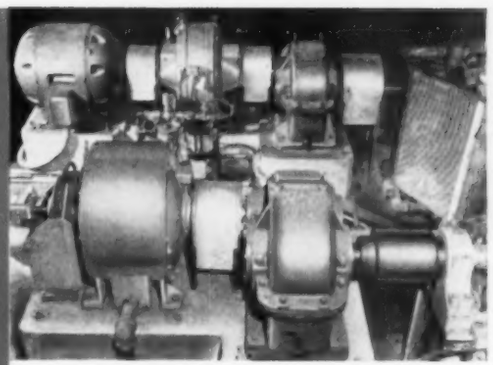
E. E. STEPHENSON (right), has joined the faculty at Western Michigan State College. He teaches only one course, so is able to carry on with his work at Sutherland Paper Co., in Kalamazoo. He was a former student in pulp and paper technology dept. at Western Michigan.

SOUTHERN SIDELIGHTS

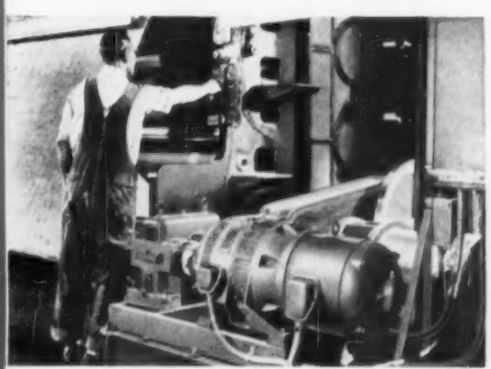
Evans Moves to Brown Mill; Moore Is Olin-Mathieson V.P.

ROBERT H. EVANS, general manager of Forest Products Division of Olin-Mathieson Chemical Corp., and now a vice president, has moved his headquarters from Shreveport, La., to the paper mill (formerly Brown) in West Monroe, La. He was a former director and treasurer of Riegel Paper and participated in development of plans for the company's pulp mill at Acme, N. C. Brown Pap Mill Co. has been integrated into , e Forest Products Division. . . . **T. R. MOORE,** formerly vice president and general mill manager for Brown, is named vice president of Olin-Mathieson in charge of the paper operations of the Division. **W. H.**

Continued on page 18



Model WB-670 liquid cooled, eddy-current brake used on paper slitter center unwinder, and a WC-160B liquid cooled, eddy-current coupling with eddy-current brake, rated 125 HP at 1100 RPM, used on a surface rewinder, in plant of Continental Paper Company, Richfield Park, N. J.



Frame 3265, 15 HP at 1700 RPM Ajusto-Spede® drive installed as a center rewind on a Kidder press at Marathon Paper Company, Menasha, Wisconsin.

Model 30WC1B liquid cooled, adjustable speed, eddy-current coupling, rated 600 HP at 580 RPM. One of 4 paper machine main drives at Howard Smith Paper Mills, Ltd., Cornwall, Ontario.

EATON

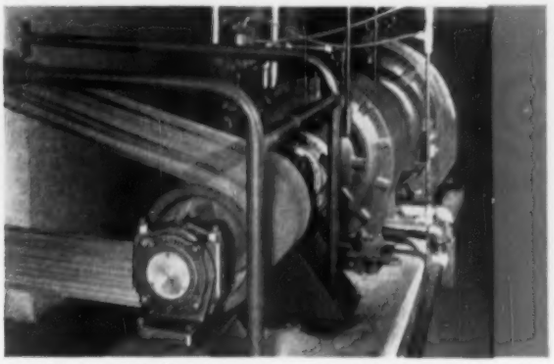
DYNAMATIC®

EDDY-CURRENT EQUIPMENT

Finds Many Applications in the Paper Industry

From pulp-wood operation to finished carton, magazine, newspaper, or cellulose product, Dynamatic eddy-current equipment is widely used in the paper industry to fulfill a long list of variable speed requirements, maintain constant tension or constant speed, and activate automatic processing operations. In such applications as paper machine line shaft and accessory drives, pulp processing drives, winder and unwinder drives, calenders, slitters, and printing machines, Dynamatic equipment contributes to the quality of the finished product. In addition, these trouble-free units make for increased production, uninterrupted operation, with minimum maintenance, and reduced costs.

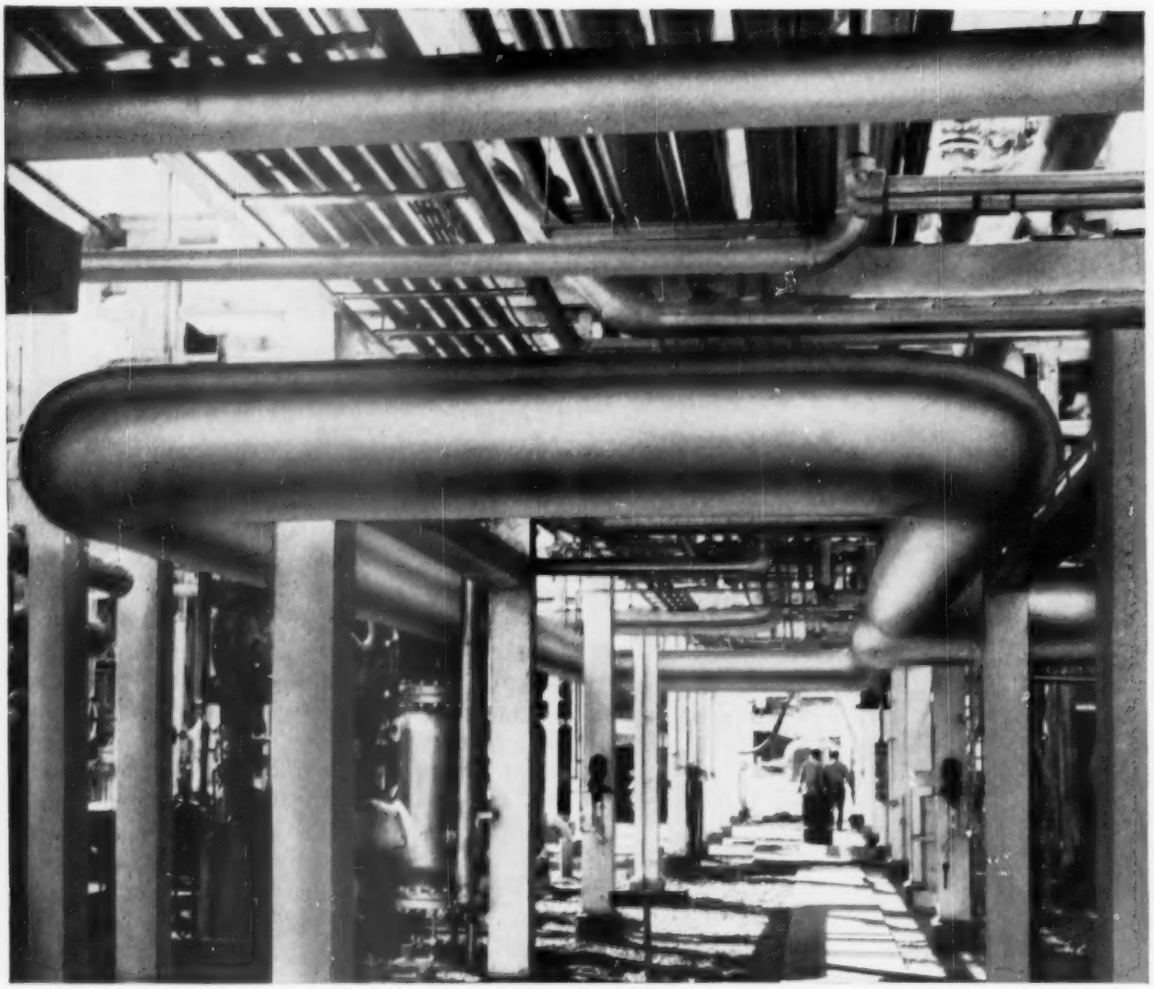
Send for your free copy of Bulletin GB2, which illustrates and describes the basic Dynamatic Eddy-Current units.



Model WC-170 liquid cooled, adjustable speed, eddy-current coupling, rated 200 HP at 1100 RPM. One of 2 main drives driving 112" Fourdrinier paper machines at Fletcher Paper Co., Alpena, Michigan.

EATON MANUFACTURING COMPANY — DYNAMATIC DIVISION

3307 FOURTEENTH AVENUE • KENOSHA, WISCONSIN



Less heat loss at joints with single-layer Unibestos® Pipe Insulation

Tests prove that Unibestos single-layer pipe insulation actually provides greater protection than other nonfibrous *double-layer* insulations which cost more to install. Unibestos is made of Amosite—the long-fibered African asbestos. These fibers interlock with one another to prevent heat loss at horizontal and longitudinal joints.

While most insulating materials show a pronounced shrinkage at high temperatures, Unibestos has no measurable shrinkage at 1200°F. It will not powder, pulp or wash off, even under heavy moisture conditions, and when dry, Unibestos resumes its original thermal and physical characteristics.

EASY to install . . . easy to remove.

Unibestos can be cut, mitered and handled easily. The fabrication of insulation for tees, valves, flange covers, etc., is a fast, low-cost operation. Because of its unusual strength and durability Unibestos can be removed and replaced with little or no loss of material.

STANDARD PRODUCTION SIZES

Unibestos Pipe Insulation is regularly made in 3-foot lengths for pipe sizes from ½″ through 24″, in standard thicknesses through 5″. Unibestos Block Insulation is made in 6″, 12″, 18″ or 36″ widths and in thicknesses from 1″ through 3″ in ½″ increments.

For complete information, write for descriptive Bulletin 109C

UNARCO

UNION ASBESTOS & RUBBER COMPANY
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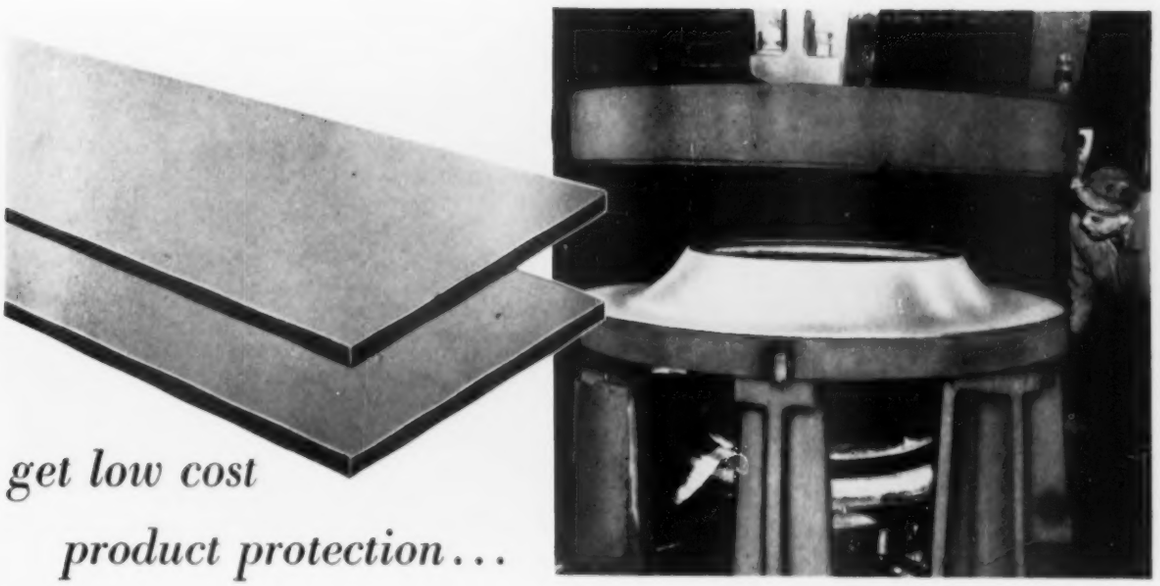

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product protection...

with

Press-forming a LECTRO-CLAD part. Because the nickel plating withstands normal working pressures, fabricators can use standard steel shop methods and equipment.

Easy-To-Fabricate

CF&I LECTRO-CLAD® *Nickel Plated Steel*

CF&I LECTRO-CLAD Nickel Plated Steel Products provide positive protection against product contamination and discoloration in transportation, storage and processing operations. That's because this new product is electro-plated with a heavy layer of nickel that's 99% pure. *You get the advantages of solid nickel or nickel-clad at far less cost.*

What's more, steel fabricators are fast finding that it takes no expensive special handling or equipment to work CF&I LECTRO-CLAD. Because of the high tensile strength of the nickel and the firm nickel-to-steel bond, the nickel plating will withstand working to and beyond the point where the steel itself would fail. CF&I LECTRO-CLAD exhibits excellent working qualities in die forming, pressing, rolling, flame cutting and welding. It can be sheared or punched with the same equipment used for commercial steel plates.

If you use – or fabricate – heavy industrial equipment where product contamination is a problem, you can probably use CF&I LECTRO-CLAD to good advantage. CF&I manufactures plates, pipe, heads and many fittings in this material. For further details, write for the CF&I LECTRO-CLAD Technical Manual. Wickwire Spencer Steel Division, The Colorado Fuel and Iron Corporation, P.O. Box 1951, Wilmington, Del.

Claymont Steel Products

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Stainless-Clad Plates • Manhole Fittings and Covers • Large Diameter Welded Steel Pipe • Flame Cut Steel Plate Shapes
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3604

STRICTLY PERSONAL

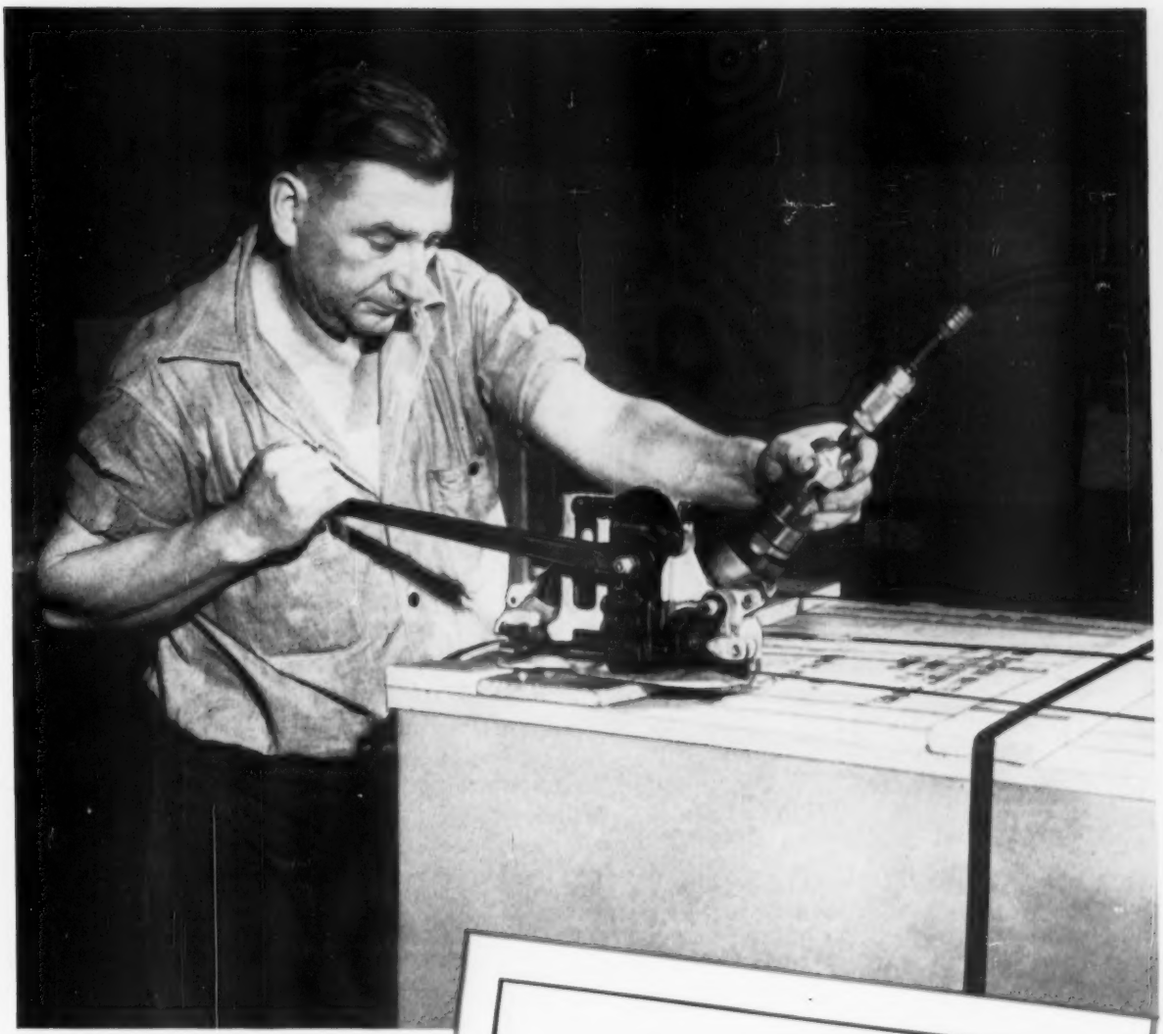
SOUTHERN SIDELIGHTS, continued BROWN, formerly production manager for the Division, is named a vice president in charge of lumber manufacturing. . . . CHARLES KELLEY, JR., vice pres. of McCluskey Wire Co. Inc., who was at Savannah Supts. conclave, announces that SLAUGHTER MACHINERY CO., Charlotte, N. C., will serve as sales agents for McCluskey wires. ED SLAUGHTER was at the Savannah Supts. meeting with Mr. Kelley. The Charlotte firm also represents Mt. Hope Machinery and Poirer Control Co. . . . GEORGE R. GARDNER, power plant supt. at I. P.'s Natchez, Miss., mill has been transferred in the same capacity to the Mobile mill. GEORGE C. PRIEST, onetime asst. power plant super at the Georgetown, S. C., mill, was promoted into the Natchez position. Mr. Gardner joined I. P. at Panama City in 1936, came to Natchez as first asst. power plant supt. in 1950 and became supt. in 1951. Mr. Priest joined IP at the Louisiana mill at Bastrop in 1935, was transferred to Georgetown in 1937. . . . Also at the Natchez mill, congratulations are in order for three technicians who won promotions. BYRON PRENTISS, former chief quality control chemist, is now second asst. chief chemist. JOHN J. PUHR, moved up from operating control chemist to succeed Mr. Prentiss and THOMAS C. ROS, onetime shift operator, takes over as operating control chemist. . . . FRANKLIN JONES, paper mill supt. at Fernandina Container Corp. of America mill, is new third vice president of Southeastern Superintendents. Frank went to CCA just a year ago from the St. Joe Paper Co., is now the newest man on Gen. Mgr. BOB PHINNEY's top supervisory staff. . . . LOWELL MAGINNIS, asst. resident mgr. at Jesup, Ga., Rayonier mill is all smiles now that his new home there is completed and he and his family have moved in. . . . ROY HOMANS, Brunswick Pulp & Paper development engineer, and his family are facing the rigors of the Yankee climate in Appleton, Wis., where he is attending the Institute of Paper Chemistry for the coming scheel year. Last year Brunswick sent BOB FLICK to the Institute. . . . WILLIAM BRACKETT, former field technical representative of Devoe and Raynolds Co., Louis-

Continued on page 22

Law Moves to Cleveland; Haskell Engineers Expansion

GEORGE LAW (left), who has been Reliance Electric & Engineering Co.'s special representative in the major paper industry center of Appleton, Wis., moves to Cleveland, O., headquarters to work in application engineering, specializing on pulp and paper mill equipment under J. L. Van Nort. Nick Bachynski, formerly of Abitibi in Canada, replaces Mr. Law in Appleton.

B. W. HASKELL (right), has been appointed Field Project Engineer of Rayonier's new $25,000,000 chemical cellulose mill at Jesup, Ga., it is announced by Russell F. Erickson, Vice President in charge of Mfg. and Engineering. A native of Savannah, and Georgia Tech graduate, Mr. Haskell joined Rayonier in 1946 as a Staff Engineer. He has served as Res. Engr. at the Fernandina Beach division, and later became Asst. Mgr. in charge of Engineering and Maintenance at Jesup.



Now Available to American Industry the First Air-Powered Strapping Machine

OUTSTANDING FEATURES

- Air power does the hard work—fast
- Tension is just right every time
- Field-tested dependability
- Light weight, portable

For ⅜" and ¼" Signode strapping; automatic seal-feed magazine holds 75 seals; tension adjustable to 1600 pounds.

For more information, write

SIGNODE Steel Strapping Co.

2672 N. Western Ave., Chicago 47, Ill.

Offices coast to coast—Foreign subsidiaries and distributors world-wide
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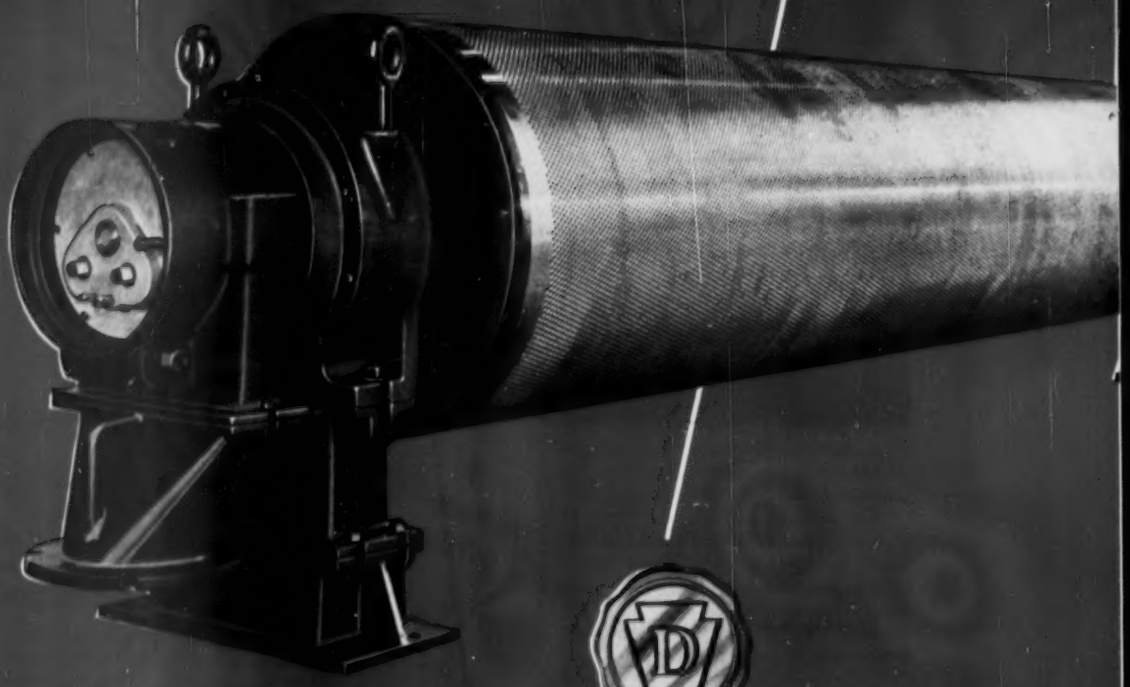

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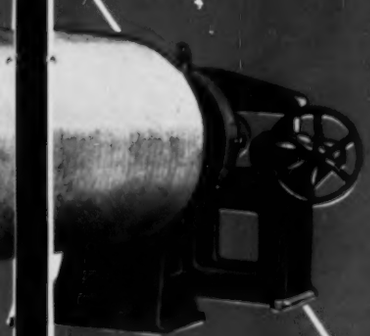
DOWNINGTOWN

Proudly Presents...

to the Pulp and Paper Industry

a Complete Line of
SUCTION ROLL and VACUUM EQUIPMENT



As Downingtown Manufacturing Company terminates its paper machinery manufacturing activities, the Black-Clawson Company becomes the source of the famous line of Downingtown Suction Rolls. This equipment is now designed, engineered and built by experienced Downingtown personnel at Black-Clawson's Machine Division, Watertown, N. Y.

The joining of these two well-known names provides the pulp and paper industry with a single source for a most complete and modern line of Suction Roll and Vacuum equipment for every paper machine application.

Now Designed, Engineered and Built by

The **BLACK-CLAWSON** *Company*

WATERTOWN, NEW YORK

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SOUTHERN SIDELIGHTS, continued

ville, Ky., has been transferred to Truscon Laboratories Division and will cover Louisiana, Alabama, Mississippi and Arkansas, concentrating on pulp and paper and other industrial and building maintenance products of Truscon, as part of its expansion program. . . . **MR. and MRS. GUY HEMPHILL**, of Champion's Carolina mill, still talking about the 8,000-mile trip they took this summer through Holland, Belgium, Austria and Germany. . . . **HUGH MEASE** and his wife **KATE** of Champion in Carolina, recently played host and hostess to a group of Southern Railway superintendents at Lake Logan. Big surprise of the weekend: the ladies took all fishing honors. . . . **A. SIEGEL** has been promoted to eastern division sales manager of Bags and Paper for Southern Kraft Division of I.P. He joined the company in New York in 1925 and has been assistant sales manager of the Southern Kraft Division in charge of all paper products since 1935. **HUGH B. VERGARA** takes over his old job.

Two "Look Alikes" in Everett

On Pulp Consumers tour to West Coast, some paper company execs remarked on resemblance of two key men in the Weyerhaeuser kraft pulp mill. These pictures show it—JOHN McEWEN (extreme left), Technical Director, and GEORGE HANSEN (third from left) Chief Chemist at Weyerhaeuser's Everett, Wash., kraft mill. L. to r. Mr. McEwen; REED PORTER. Secy-Treas. of Consumers Assn.; Mr. Hansen; GEORGE DUNN, Exec. Vice Pres. of Dunn Paper Co., and BILL GILBERT, Secy-Treas. and Purch. Agent, Gilbert Paper Co.

PACIFIC PATTER

Baldwin Made a Director; West Linn Promotions

PAUL C. BALDWIN, vice president, recently was made a director of Scott Paper Co. Only recently he had duties of directing staff engineering, research and development at Chester, Pa., added to his responsibilities in charge of all West Coast manufacturing. He has been resident of Everett, Wash., since 1951. He has a ph.d. and master's from the Institute of Paper Chemistry and is a graduate of Syracuse. . . . **LEO P. NEWTOWN**, has been promoted to assistant paper mill supt., Crown Zellerbach's West Linn, Ore., mill. **HUBERT M. LYLE** succeeded him as assistant to paper mill supt. . . . **WARREN MOWRY** has been appointed Acting Supt., Paperboard Division, Puget Sound Pulp and Timber Co., assuming the duties formerly performed by **DENNIS CRITZER**, Supt., who terminated his employment with the company. Mr. Critzer, 53, is oldest of seven brothers now or formerly in the paper industry. Still active in this industry are Luther, at Container Corp., Los Angeles; Ed at West Va. P & P, Covington, Va., Hencil at Northwest Paper and Herman at Camp Mfg. . . . **DR. WINTON I. PATNODE** has succeeded **CLARK C. HERITAGE**, retired, as director of research and development, Weyerhaeuser Timber Co., Tacoma, Wash. . . . **THOMAS MARTIN JR.**, chief chemist, **KEN KEARCHER**, job methods and training director, **RICH-**

Continued on page 26

One roll leads to another . . .

. . . or to be more correct, one Stowe-Woodward roll leads to another.

It is a matter of considerable pride on our part, that almost invariably the performance of the first roll we supply for any machine position results in an order for additional rolls for similar service. This . . . what you might call a roll buying chain reaction . . . is papermakers' approval; and in the final analysis it is the only kind that counts.

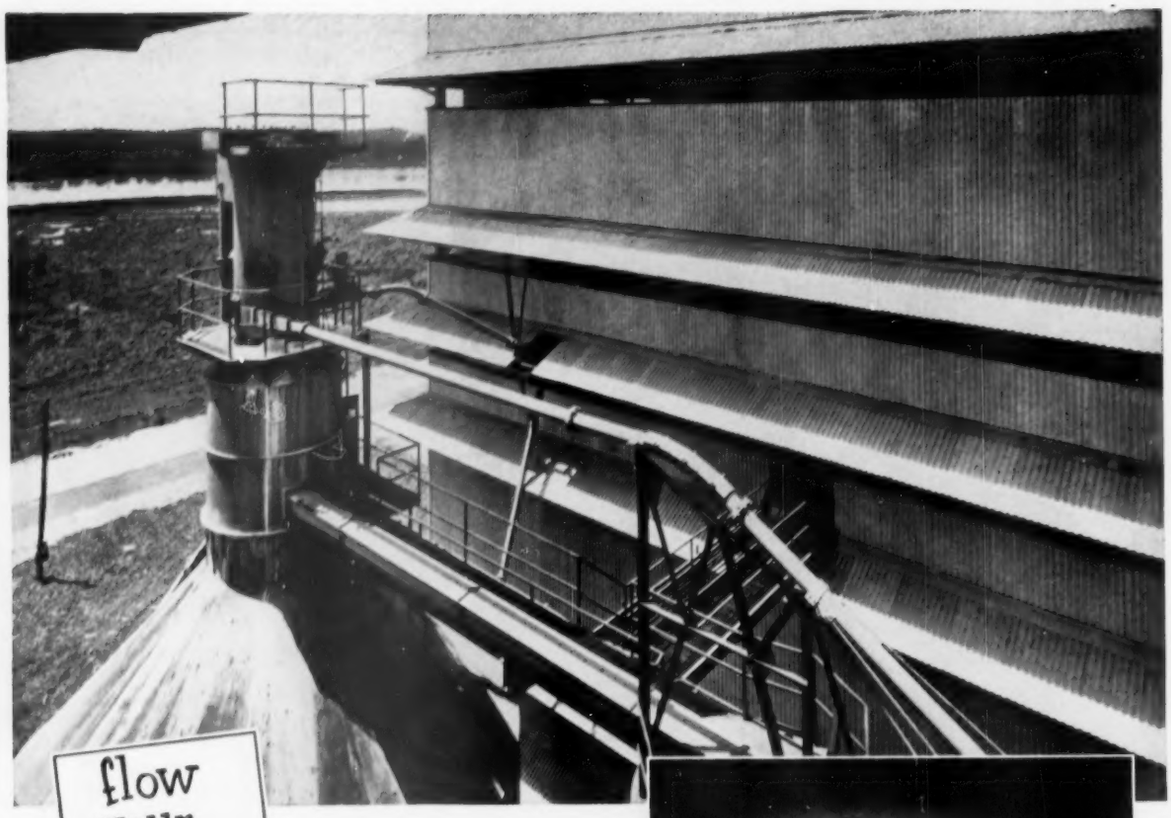
Maybe it's time you started with your first in a long line of

"RUBBER ROLLS with a REPUTATION"

STOWE-WOODWARD, Inc.

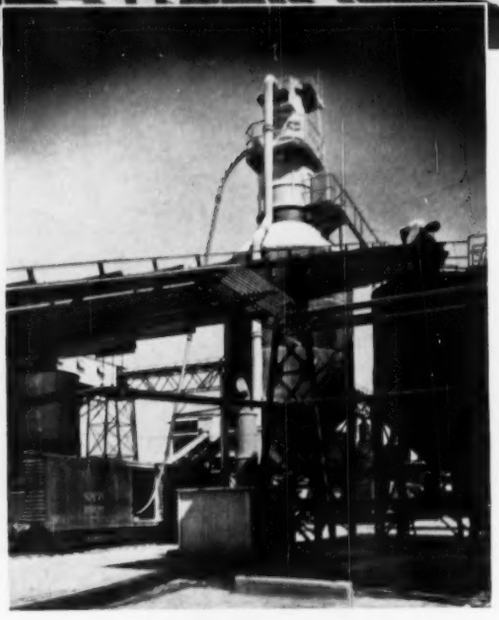
Craftsmen in rubber rolls

NEENAH, WISCONSIN — NEWTON 64, MASSACHUSETTS — GRIFFIN, GEORGIA



flow your bulk chemicals

from cars to storage...in-plant to process *with* **the AIRVEYOR®**



Handling your mill-supply chemicals . . . lime, soda ash, salt cake, starch and clays with the Airveyor—unloading from cars to storage or in-plant conveying—is the simplest, cleanest, and most economical method of doing the job.

Illustrated is an Airveyor installation in the south. Upper photo shows a system for unloading salt cake from cars to two storage bins at rate of 10 tons an hour. Also reclaims from storage and delivers to a service bin in the recovery building. Lower photo shows another system in the same plant unloading pebble lime at rate of 10 tons an hour, delivering to storage in the causticizing plant.

Well over 100 Airveyor systems are in service in the pulp and paper industry in the United States and Canada. This popularity is due to its inherent ability to perform, day in and day out, efficiently and with minimum attention and maintenance expense.

Fuller Company experience of over a quarter century in air-conveying places it in a top position to recommend and design a system that will give you the most economical results. A study of your operation will cost you nothing . . . may well show the way to consistently profitable operation and a smoother flow in production.

FULLER COMPANY, Catasauqua, Pa.
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. . . . pioneers in harnessing AIR

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PACIFIC PATTER, continued

ARD BRADFORD, engineering staff, and **RUSSEL HICKEY JR.**, project engineer, are recent newcomers at Stockton, Calif., board mill of Fibreboard Products, Inc. . . . **KARL RAAKA** and **MARSHALL DOYLE**, California researchers of Shell Oil and Shell Development Co., have been working at the Institute of Paper Chemistry, the former staying on for six months. . . . **NICK JAPPE**, with Scott Paper Co., Anacortes, Wash., until 1952, after graduating from the U. of Washington '45, was married recently to a Fort Worth, Tex., girl. He's at the Institute now and he and his bride, Jo, live at 47 West Court, Appleton, Wis. . . . Recent promotions at Longview Fibre Co.: **LYLE DUPRAS, CARL LEITZ,** and **EMETT JOHNSON** to tour foreman; **MAX ZIMMERMAN** advanced from back tender to stock preparation foreman; **A. E. CARL**, formerly maintenance foreman, to design engineer; **J. B. JOHNSON** to shift chemist, **N. H. JOHNSON** to shift maintenance foreman, and **G. C. BRONOLD** to paper shipping foreman. . . . **J. D. MORGAN** is new purchasing agent for Oregon P & P and Columbia River Paper Mills. He was succeeded as asst. purchasing agent by **C. J. FAHLSTROM,** who is son of Asst. Mgr. **CARL FAHLSTROM** of Longview Fibre. . . . **GEORGE E. MARTIN**, chief chemist of Fibreboard Products mill at Antioch, Calif., has been transferred to the San Joaquin division at East Antioch. . . . **ROBERT H. QUICK**, from the Institute of Paper Chemistry, has joined Weyerhaeuser at Longview, Wash., as project chemist. . . . **ROBERT S. CHAMBERLIN** has joined the San Francisco office of Chicago Bridge & Iron Co., transferring from general sales in Chicago. He is a graduate of U. of Utah. . . . Transferred to Los Angeles for Chicago Bridge is **ALBERT G. ALBERTSON,** a George Washington U. graduate. . . . **JOSEPH E. CONNELL** has been appointed as sales mgr. of a new industrial chemicals sales department of Nopco Chemical's Pacific Division at Richmond, Calif. He heads sales of chemicals to Coast pulp-paper mills. He had been industrial sales rep. in Southern Calif. . . . **B. E. CALHOUN**, Marathon sales, as president of Paper Mill Men's Club of Southern Calif., welcomed 450 guests at their annual Hi-Jinks in Glendale, Calif. He called Southern Calif. the "most rapidly expanding market in world." General chairman was **C. A. MEGINNISS**, Oneida Paper Products Inc. sales; vice chairman was **HARRY GRANGER**, Oregon P & P Co. More

Continued on page 30

DOW

You Can See Why

SARAN LINED PIPE

CUTS CORROSION COSTS

Corrosion resistant Saran Pipe swaged into steel is your answer to downtime losses.

Saran lined pipe, fittings and valves are built to convey acids, alkalies and other corrosive liquids at low over-all costs. The durable inner lining eliminates shutdowns due to corrosion and forms snug, tight-fitting joints that prevent leakage.

Saran lined pipes, fittings, and valves are easily and inexpensively installed. They are cut and threaded in the field with any standard pipe fitter's tools. Because of saran lined pipe's rigidity, even long spans require a minimum of support.

If your operation requires the conveying of corrosive liquids, and if downtime losses are troubling you, investigate saran lined pipe, fittings, and valves today. For further information, contact the Saran Lined Pipe Company, 2415 Burdette Avenue, Ferndale 20, Mich. Dept. 526E-3

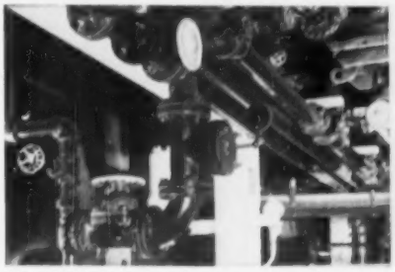
RELATED SARAN PRODUCTS—Saran rubber tank lining • Saran rubber molding stock • Saran tubing and fittings • Saran pipe and fittings.

SOME OF THE MANY INSTALLATIONS USING

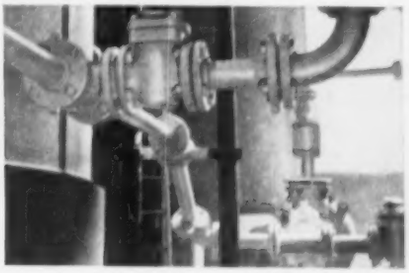
SARAN LINED

STEEL PIPE

Saran Lined Pipe is Manufactured by The Dow Chemical Company Midland, Michigan

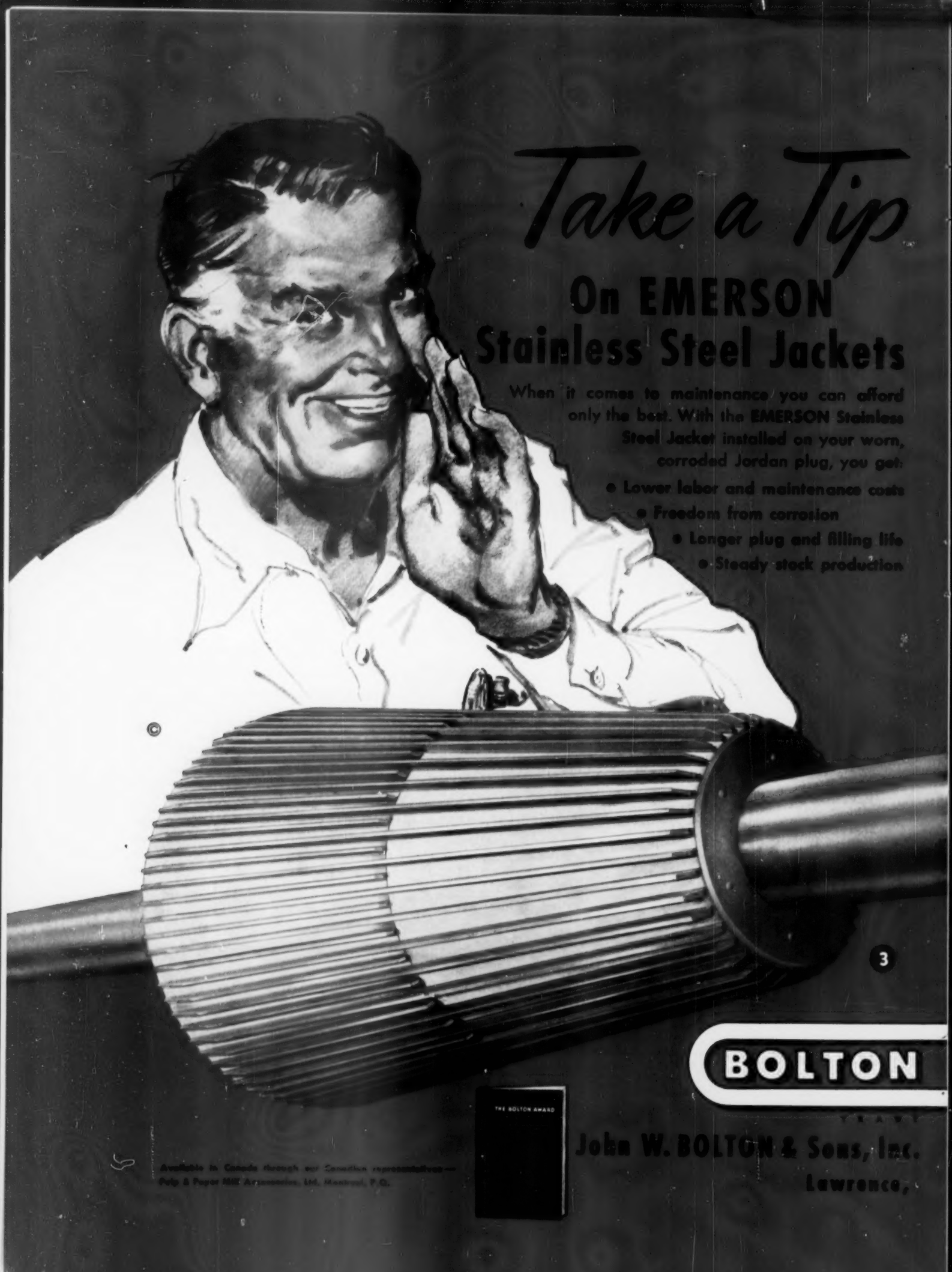


A large chemical company uses this installation to convey demineralized water. It has a perfect record of keeping the water free of contamination for five years!



Saran lined pipe used for conveying hydrochloric acid at temperatures from 20° to 90°C., has had no unscheduled interruptions due to corrosion for over two years!

you can depend on DOW PLASTICS DOW


Take a Tip
On EMERSON
Stainless Steel Jackets
When it comes to maintenance you can afford only the best. With the EMERSON Stainless Steel Jacket installed on your worn, corroded Jordan plug, you get:
• Lower labor and maintenance costs
• Freedom from corrosion
• Longer plug and filling life
• Steady stock production
3
BOLTON
THE BOLTON AWARD
John W. BOLTON & Sons, Inc.
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Available in Canada through our Canadian representatives—
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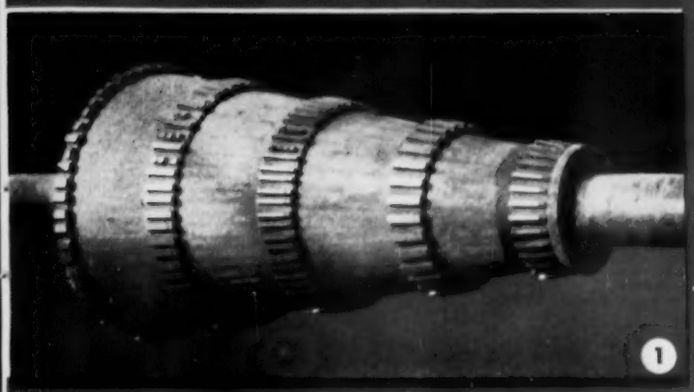
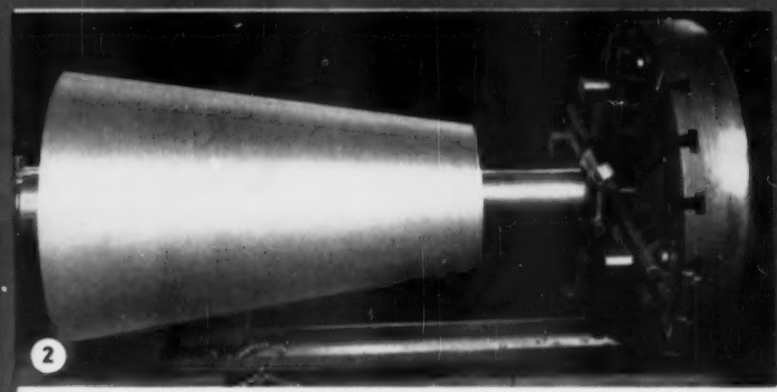
EMERSON, and only EMERSON, patented Stainless Steel Jackets are designed for any Jordan plug — are designed for any size, interchangeable, BOLTON Wedgeless Plug Knives to meet your production requirements. To have these advantages here's all you do:

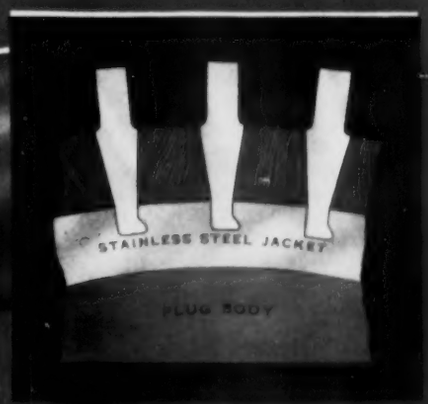
Remove your old plug and shaft intact (don't spend a cent dis-assembling plug from shaft) and ship.



Typical worn, corroded plug during processing to restore its usefulness with a stainless jacket.



Mounted stainless jacket being precision machined prior to slotting.



Patented jacket construction for maximum strength and service. Knives of any model or size can be interchanged.

Your old plug ❶ is turned down and a heavy stainless jacket is applied by a patented process. It is precision machined ❷ then milled to form dove-tailed wedgeless slots for the knives. New shaft sleeves, stainless steel end plates and stainless steel end rings are mounted. The plug is tested for perfect balance and the shaft indicated for straightness.

With woods and knives installed on the stainless jacket the transformation is complete. Your plug becomes a new solid unit of operating strength ❸ completely protected against corrosive liquids and equipped with performance-proven **BOLTON Wedgeless Fillings** for long, trouble-free, rugged service.

Want to learn more about **EMERSON Stainless Steel Jackets?** *Clip and send this coupon now!*

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JUSTIN (PAT) McCARTHY, JR., son of **JUSTIN McCARTHY SR.**, who is vice pres. and chief engineer of St. Regis Paper Co., and now busy in building the big new pulp mill in Alberta, is going to "get his feet wet" in this industry on the sales staff of St. Regis in Montreal. . . . **J. REGINALD MILLER** is new personnel supervisor at the Bathurst (N. B.) Power & Paper Co's mill, succeeding **FRANK LOGGIE**, transferred to Montreal head office. . . . **ALBERT McKAY**, formerly with Bowater, has been named a director of Western Stevedoring Co., Vancouver, B. C. . . . **J. B. FREDERICK** is new technical superintendent of Kimberly-Clark Corp. at Kapuskasing, Ont. **THOMAS ROSBOROUGH**, for eight years townsite manager for the affiliated Spruce Falls Power & Paper Co., has left "Kap" for Toronto. . . . **E. O. WOOD**, resident engineer at Ontario-Minnesota's Kenora, Ont., newsprint mill; **J. W. G. BELANGER**, Kenora engineer, and **WILLIAM M. GOW**, electrical engineer at the company's Fort Frances mill, are involved in personnel changes. Mr. Wood will act as liaison between the company and H. A. Simons, Ltd., consultants on Kenora expansion; Mr. Belanger becomes plant engineer, and Mr. Gow, senior electrical engineer in company's central engineering division. . . . **HARVEY KELLEY**, former general superintendent of newsprint at Bowaters-Newfoundland, is to be machine room superintendent of the new newsprint mill being built at Port Alberni, B. C., by MacMillan & Bloedel. . . . **ANDRE ROLLAND**, purchasing agent of Rolland Paper Co., Quebec, and **JOHN COPPICK**, Price & Pierce, Montreal office, visited Harmac and Port Alberni, B. C., recently. **TED KIRBY** Canadian director, and **ROBERT BONNET**, Paris rep, of Price & Pierce, also were on the coast. . . . **DR. GUENTER KERSER**, economist of the Seldemuhle paper organization in Dusseldorf, West Germany, was a recent visitor to Vancouver Island pulp mills. . . . **S. E. O'RIORDAN**, director of Gilmour Tullis Russell & Co. Markinch, Scottish papermakers, has been touring Canadian mills with company chemist, **ALEX GILMOUR**.

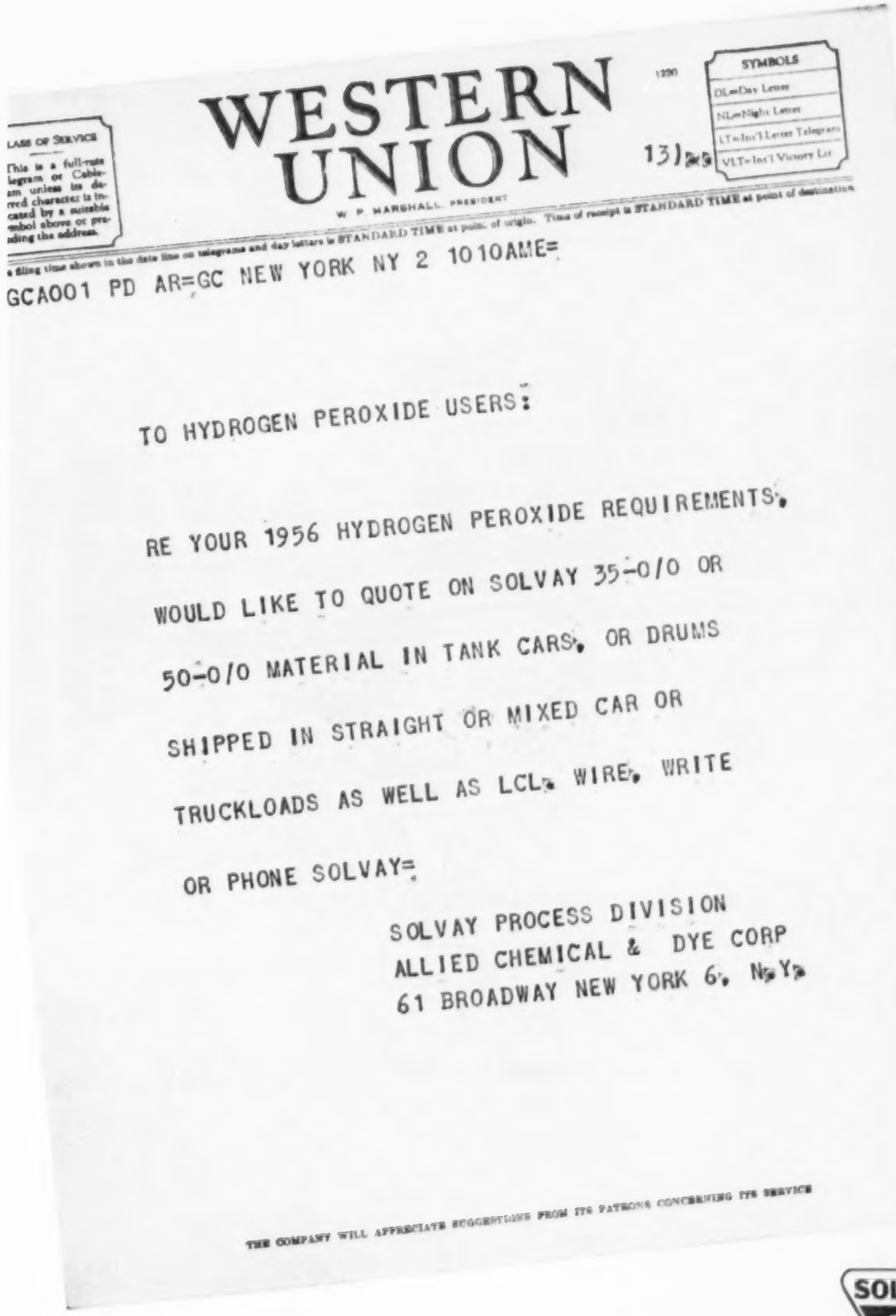
Bradshaw Heads All Mfg.; Magnus Is A Consultant

FRED W. BRADSHAW (left), is new Mgr. of Mfg. for all Consolidated Paper Corp. mills—Cap Madeleine, Grand Mere, Port Alfred, Shawinigan Falls and Three Rivers, all in Quebec. Headquarters are at Sun Life Bdg., Montreal. Mr. Bradshaw was formerly Mgr. of the Laurentide Div., Grand Mere. All divisions make over 2,500 tons a day of newsprint, plus lesser quantities of kraft paper, board and wrapping. They make groundwood, sulfite and kraft pulps, consuming over 3,100 cords a day of peeled wood.

CARL MAGNUS (right), former Manager and Supt. of Midwest mills and more recently Vice Pres. and Gen. Mgr. of Halltown Paper Board Co., Halltown, West Va., has entered practice as a Management Consultant, offices at Charlestown, West Va. Before going to Halltown, he was Supt. at Moraine Paper Co. in Ohio and held similar posts in Wisconsin. Earlier in his career he was a paper industry specialist in Latin America.

AUSTRALIA PERSONALS

F. R. NEALE, senior research chemist, Australian Newsprint Mills for many years, has resigned to devote all his time to sheep-raising. . . . **T. A. KING**, formerly with Australian Newsprint Mills, at Maryvale mill, has been transferred to the Botany mill, where he will serve the new work study department. . . . **B. R. JOHN**, another ANM man, has gone to New Zealand to become a member of the Tasman Pulp & Paper Co. staff. . . . **DR. L. G. NEUBERGER**, formerly of the Wellington laboratory, has been made control superintendent at Tasman's mill at Kawerau. . . . **J. W. THORPE**, district manager of Australian Paper Manufacturers, and **D. H. ALEXANDER**, secretary of the company, have been taking courses in top management training in Honolulu. . . . Two other APM men, **W. T. WHITE**, chief metallurgist, and **R. H. LEE** of the Botany mill, have returned to Australia after spending two years in the United Kingdom mills under the company's assisted leave scheme. . . . **C. J. MATHIESON**, assistant chief chemist, N. Z. Forest Products, was expected back in Kinleith, New Zealand, in November from visiting U.S. and European pulp mills. . . . New mill engineer at APM's Melbourne plant is **A. H. NAISMITH**.



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SOLVAY

...with corrosion-resisting WELD OVERLAY

For West Virginia Pulp & Paper Company, Graver recently completed three pulping digesters 11′ 3″ in diameter by 42′ 9″ over straight shell. To guard against localized corrosion, a portion of the top shell and head plates was overlaid with a succession of solid stainless weld beads.

One of the most serious corrosion problems for the pulping industry in recent years has been the corrosion of carbon steel digesters. Severest damage is generally found in the top head and bottom cone areas. However, the location of these vulnerable areas in a digester depends upon a number of variables, including plant filling and cooking practices. An effective method of protecting against rapid localized attack is suggested in the overlay of a thin corrosion-resistant layer of weld metal. This procedure can be applied both to older vessels and to new vessels. Such protection, while not uncommon in other industries, is unusual in the paper industry. The selection of Graver for this specialized fabrication re-emphasizes Graver's reputation for unexcelled craftsmanship.

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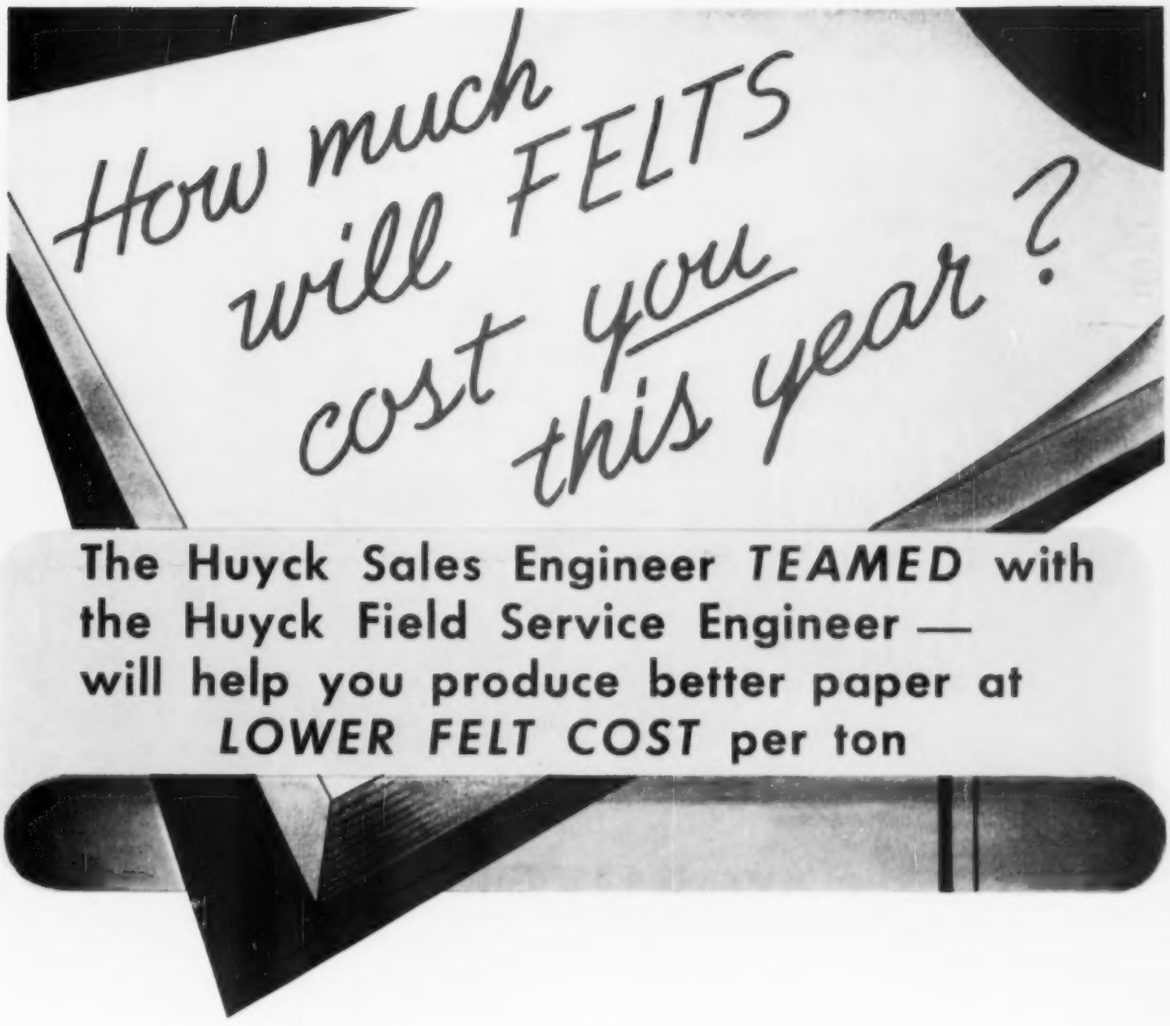

The Huyck Sales Engineer *TEAMED* with the Huyck Field Service Engineer — will help you produce better paper at *LOWER FELT COST* per ton

Huyck assigns *not one but two* "specialists" to work with you on your machine clothing requirements . . . and help keep felt costs down . . .

1. **The Huyck Sales Engineer,** thoroughly trained in feltmaking, and with an extensive background in paper manufacturing, visits you at regular intervals to help you plan your felt requirements.

2. **The Huyck Field Service Engineer,** assigned to your mill, moves in when a difficult situation arises. He follows felts in operation and maintains a close liaison with our felt designers. Applying his technical knowledge, he spends the necessary time with you to assist in solving your problems.

Take advantage of this unparalleled service, which only Huyck offers you.

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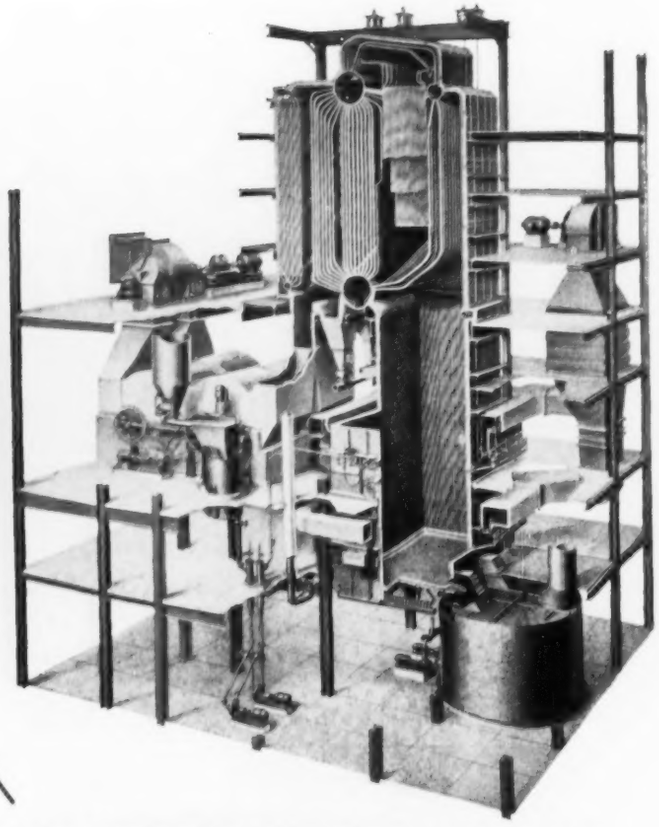
THE

C-E RECOVERY UNIT



it's ahead AUTOMATICALLY

Yes—the C-E Recovery Unit *is* ahead automatically because it is available with automatic controls that take the guesswork out of recovery unit operation. While combustion controls, flow regulators and the like have long been standard equipment on many power boiler installations, their adaptation to the special problems involved in the burning of black liquor have been an elusive goal. Their successful application to the C-E Recovery Unit is a service-proved fact.

By accurately and automatically adjusting the flow of air to the flow of fuel in just the right proportions, the C-E Recovery Unit has a sensitive response to change in black liquor flow—a response very difficult to duplicate through manual means.

The result?—More efficient black liquor combustion, less combustible matter in flue gas and more steam per ton of black liquor solids burned. This means, of course, an attendant reduction in steam costs.

Another equally important result is that the operator is no longer required to perform the tedious and time-consuming task of trying—sometimes not too successfully—to balance the air flow against an ever-changing black liquor supply. Relieved of this assignment, his time is available for other duties.

The application of automatic control to the C-E Recovery unit is still one more indication of the continuing efforts on the part of C-E to make a good product better.

Other C-E Equipment — In addition to the C-E Recovery Unit, Combustion Engineering is in a position to furnish any type of boiler, fuel burning and heat recovery equipment for supplying the steam needs of the paper mill; flash drying and calcining equipment for the recovery of lime; and pressure vessels for digestion and process. Through this wide range of C-E products, the advantages of single-contract responsibility are available to your plant.

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INTEGRATED
Pulp Processing Systems

These and other Bauer machines complement each other when integrated into one system. We can engineer a thoroughly integrated system for your mill from the chipping operation to the finished pulp ready for the paper machine.

Ask our representative to discuss a system or part of a system with you.

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SCREW-PRESSES—For expelling liquor, mild steaming, and fiberization of the cooked chips, the Bauer Pressafiner.

REFINERS—For complete fiberization and dispersing action, the Bauer Double Revolving Disc Refiner.

CLEANERS—For the most efficient job of cleaning pulps, Bauer Cleaners in the pulp mill or paper mill.

STOCK REFINERS—For stock preparation with high freeness, high tear, and low horsepower, Bauer "Pump-Through" Refiner.

Literature on any of these machines will be gladly furnished.

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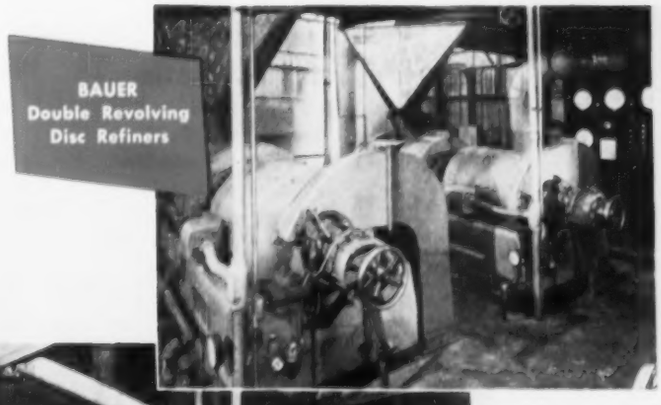

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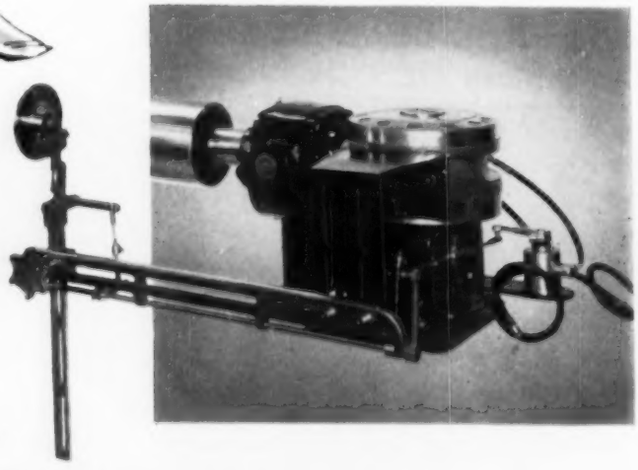
Light, medium and heavy-duty guides . . . for big or small machines . . . for wire, wet felt or dryer felt . . . for limited space installations . . . 54 models for the paper, textile, glass, rubber, plastics and dairy industries.

and, now . . . **the most efficient guide, hydraulically operated . . . the new Gilbert & Nash Hydra Guide for low, high or variable speed machines. Model 706, illustrated, with follower valve and rotary palm contributing to longer, trouble-free wire life. Gilbert & Nash guides are manufactured by the Appleton Machine Company.**



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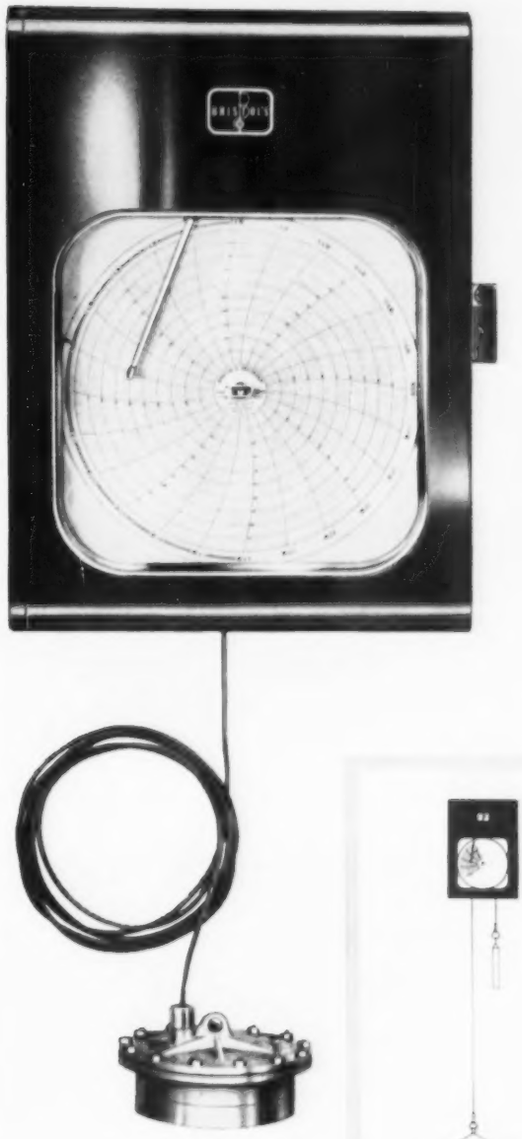
WHAT'S NEWS AT BRISTOL . . .



Bristol Liquid Level Gauges keep tabs on unruly liquids

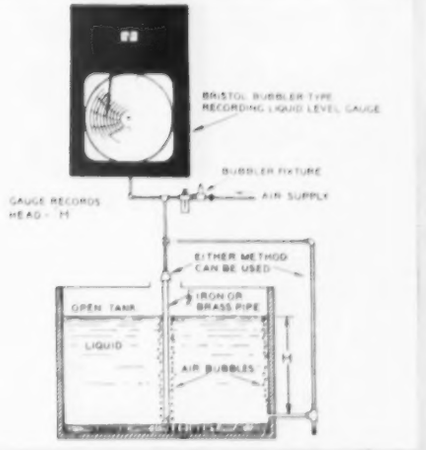
Measuring or controlling the levels of liquids can be quite a problem at times.

Especially if the liquid is flowing, turbulent, corrosive, covered with ice, carrying solid matter, or contained in a closed vessel where its surface is under static pressure.

Solving any of these problems is easy with a Bristol Liquid Level Gauge. These widely-used precision instruments indicate, record, and automatically control the level of almost any liquid without difficulty. They'll read in feet, inches, fathoms – any unit of measurement you desire.

What's more, there's a standard Bristol Liquid Level Gauge for practically every application – including Float, Pressure Bulb, Pressure, and Bubbler type Gauges and Controllers. Our field engineers will gladly study your problem and make recommendations.

Write for complete information on the instrument that will fully meet your requirements. The Bristol Company, 142 Bristol Road, Waterbury 20, Conn. 5.15



PRESSURE-TYPE GAUGES for measurement and control of levels in open vessels can be adapted to any type of mounting.

FLOAT-TYPE GAUGES are designed to measure levels of large bodies of water such as supply reservoirs or lakes.

BUBBLER-TYPE GAUGES measure levels of corrosive and solid-carrying liquids like those in pulp mills or sewage plants.

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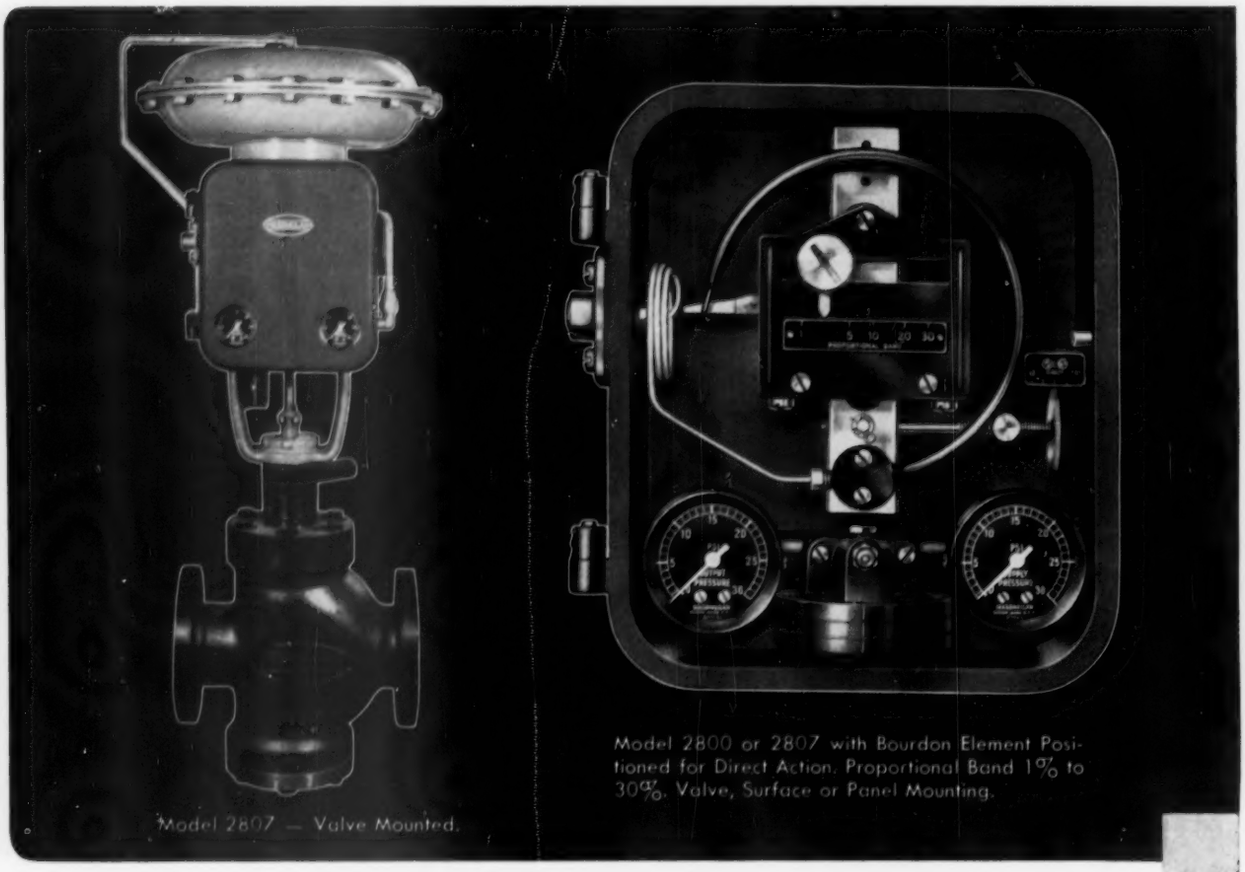


Model 2807 — Valve Mounted.

Model 2800 or 2807 with Bourdon Element Positioned for Direct Action. Proportional Band 1% to 30%. Valve, Surface or Panel Mounting.

FAST RESPONSE

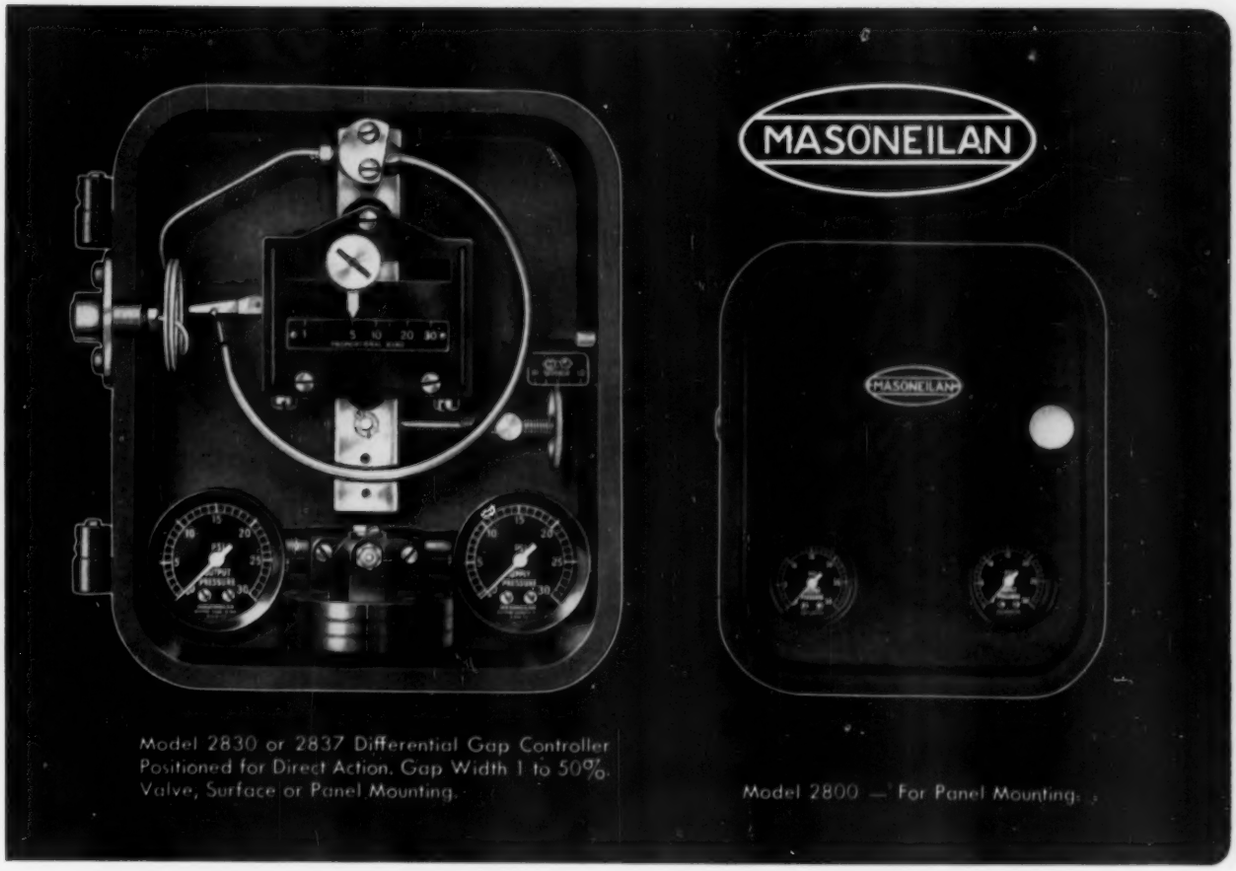
with High-Capacity Relay Pilot

HIGH SENSITIVITY

Virtually No Lost Motion

LOW COST

Moderate Price — Low Operating Cost



Model 2830 or 2837 Differential Gap Controller Positioned for Direct Action. Gap Width 1 to 50%. Valve, Surface or Panel Mounting.

Model 2800 — For Panel Mounting.

Select Masoneilan 2800 Series for Better Low Cost Pressure Controllers

These new controllers combine all the basic requirements of pneumatic proportional controllers with the added features of a high capacity, balanced, amplifying relay pilot; proportional band setting as narrow as 1% (as wide as 30%); pneumatic feedback; reversible action. Simplicity is achieved by unit construction of subassemblies and air passages integral with the case. Models 2807 and 2837 are provided with rugged weatherproof cases for outdoor use — suitable for valve or surface mounting.

A wide selection of pressure ranges is available between 30" Hg Vac and 10000 psi, with bourdon or bellows primary elements of materials most suitable for the pressure and fluid conditions.

The performance of these controllers, obtainable at moderate cost, makes the advantages of instrument control feasible for the majority of pressure control applications.

A companion model (3800 Series) is available for temperature service — with same high quality features. Employs vapor pressure thermal system; suitable ranges up to 550°F.

Investigate these controllers — ask our representative nearest you, or write for details.

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LOWER PULPING COSTS?

...then switch to the Ammonium Bisulphite Pulping Process... pioneered by the Nitrogen Division

These are the facts!

Raise Production—Faster and more thorough penetration cuts cooking time by 19% or more, with the same maximum temperatures and pressures, giving that much more production. In addition, the penetrating period with ammonia base is less critical.

Reduce maintenance costs—damage is considerably reduced because of the tremendous decrease in solid and insoluble materials passing through the system.

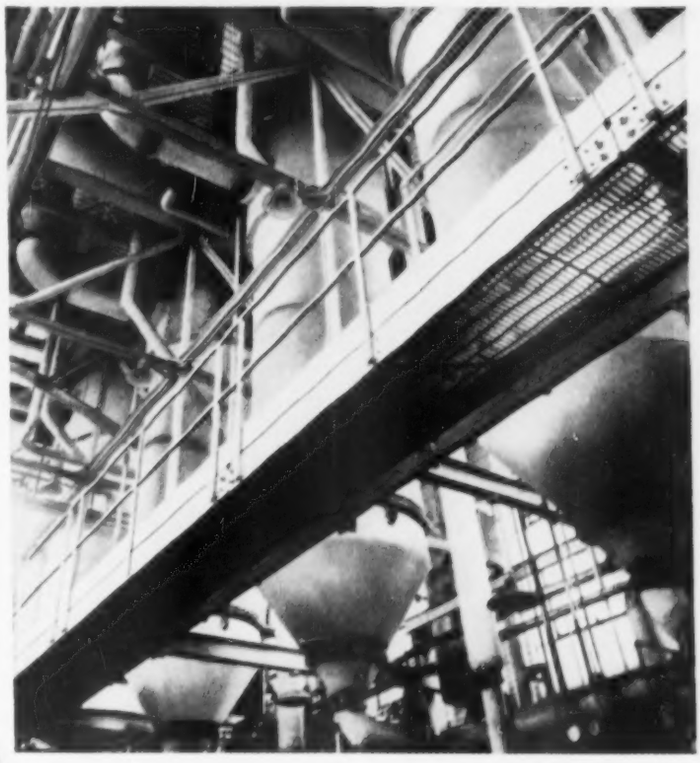
Save up to 40 lbs. of sulphur per ton of pulp—due to more efficient absorption of SO_2 in ammonium bisulfite solution.

Save the cost of labor and handling of limestone—Anhydrous Ammonia unloads from tank cars under its own pressure piped to an automatic system. There is no waste at all and the cost of lime unloading is eliminated.

Other big advantages: you increase pulp quality, increase pulp yield, decrease percent screenings, increase equipment life, handle broader variety of wood species, eliminate scaling, evaporate waste liquors easily, reduce stream pollution to a minimum.

Leading mills have converted to the Ammonium Bisulphite Pulping Process because they found pulp production is increased while pulping costs go down.

The changeover to this Pulping Process is inexpensive. A minimum replacement—and in many cases, no replacement—of equipment is involved, and there is practically no loss of production during conversion.



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- Ask for a Technical Service man to call. No obligation!

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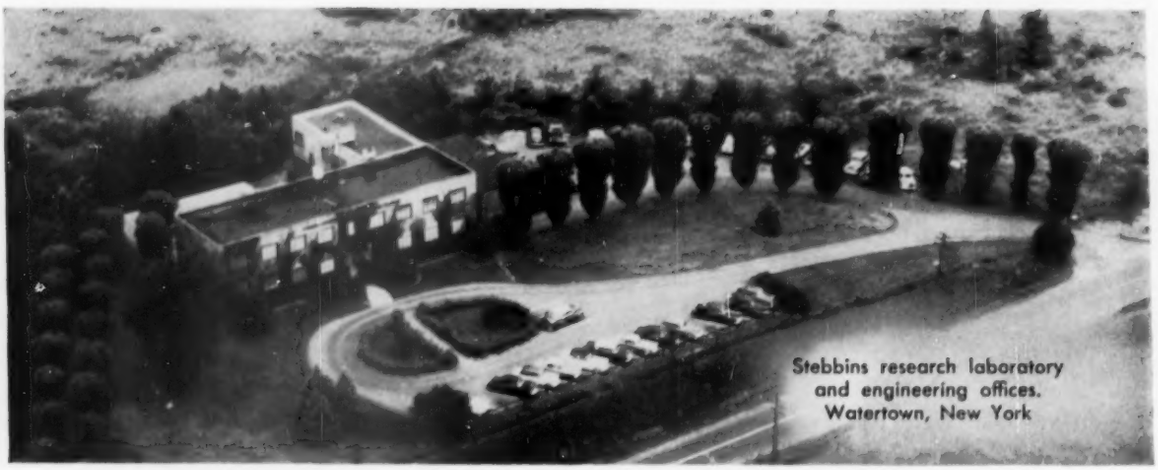

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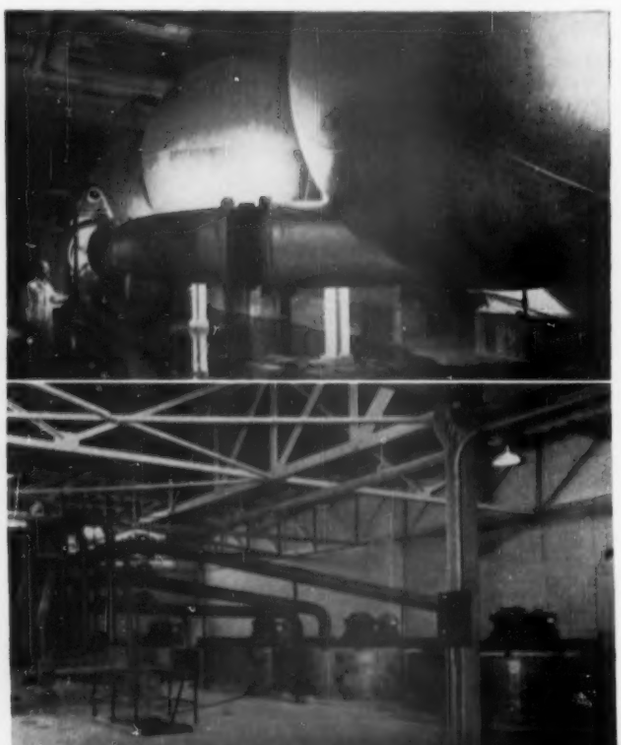

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The experience of practically all companies in the pulp and paper industry proves that it will pay you to put your corrosion-resistance problems in the hands of Stebbins specialists. Complete service, from original design to year-round maintenance. Get the facts.

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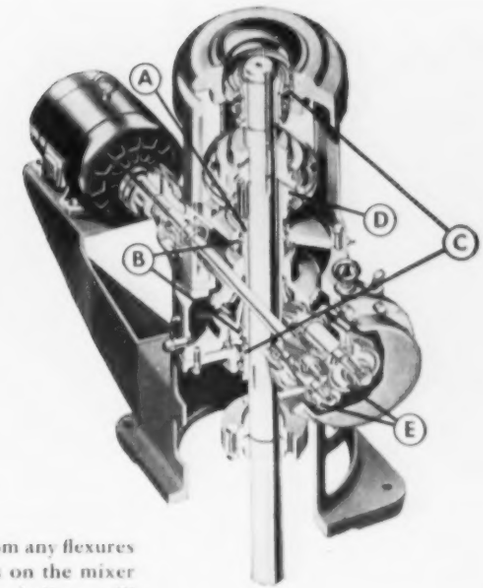
20 years' service

out of this fluid mixer



No, we can't guarantee that LIGHTNIN Mixers will mix fluids, day in, day out, for 20 years or more. But a great many of them do.

Here are just a few of the reasons why *you* may find that LIGHTNINs in your tanks enable you to hold depreciation costs down where they belong—and keep productivity *up* by minimizing shutdowns for maintenance and repair.

An important part of this LIGHTNIN Mixer is the gearing. And that's the part that needs most protection.

The gears you see here are mechanically insulated from any flexures or sudden shock loads on the mixer shaft. The gears drive a hollow quill (A), suspended in heavy-duty bearings (B) which carry power transmission loads only.

The mixer shaft is suspended in its own separate pair of adapter-type prelubricated bearings (C). The shaft passes through the quill with full clearance. Shaft and quill are connected at only one point (D) by a flexible coupling.

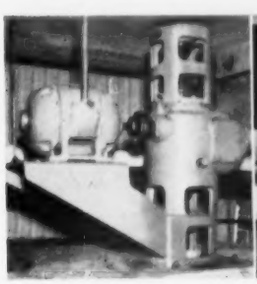
This hollow-quill construction isolates the shaft from the gearing. It saves wear on the gears, and protects them against damage. And it lets you remove the mixer shaft upward or downward, and you can even use shafts of different diameters.

Interchangeable speeds

The change gears (E) permit quick change of speed for a range of 16 standard AGMA speeds. You can change mixing speed, should it ever become necessary, by replacing two change gears with a pair of a different ratio. No special tools are required, and the mixer need not be removed from the tank.

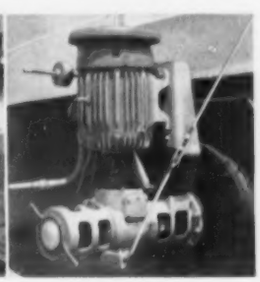
You can select from hundreds of power-speed combinations, in standard units, without need for special construction. Speeds other than standard can be had without limit.

Get set *now* to take advantage of the long-term savings you make with LIGHTNIN Mixers. For the full story, just call your LIGHTNIN representative, listed in Thomas' Register. Or write us today.



TOP ENTERING LIGHTNINs provide exact power-speed combination to fit the job. Models for open or closed tanks. Sizes 1 to 500 HP.

LIGHTNIN PORTABLE Mixers make any open tank an efficient mixing vessel. Thousands are in use. Electric and air driven types. Thirty models, ⅛ to 3 HP.



SIDE ENTERING units mix or blend fluids in tanks as large as 5 million gallons. Choice of stuffing boxes or rotary mechanical seals. 1 to 75 HP.

Lightnin® Mixers™

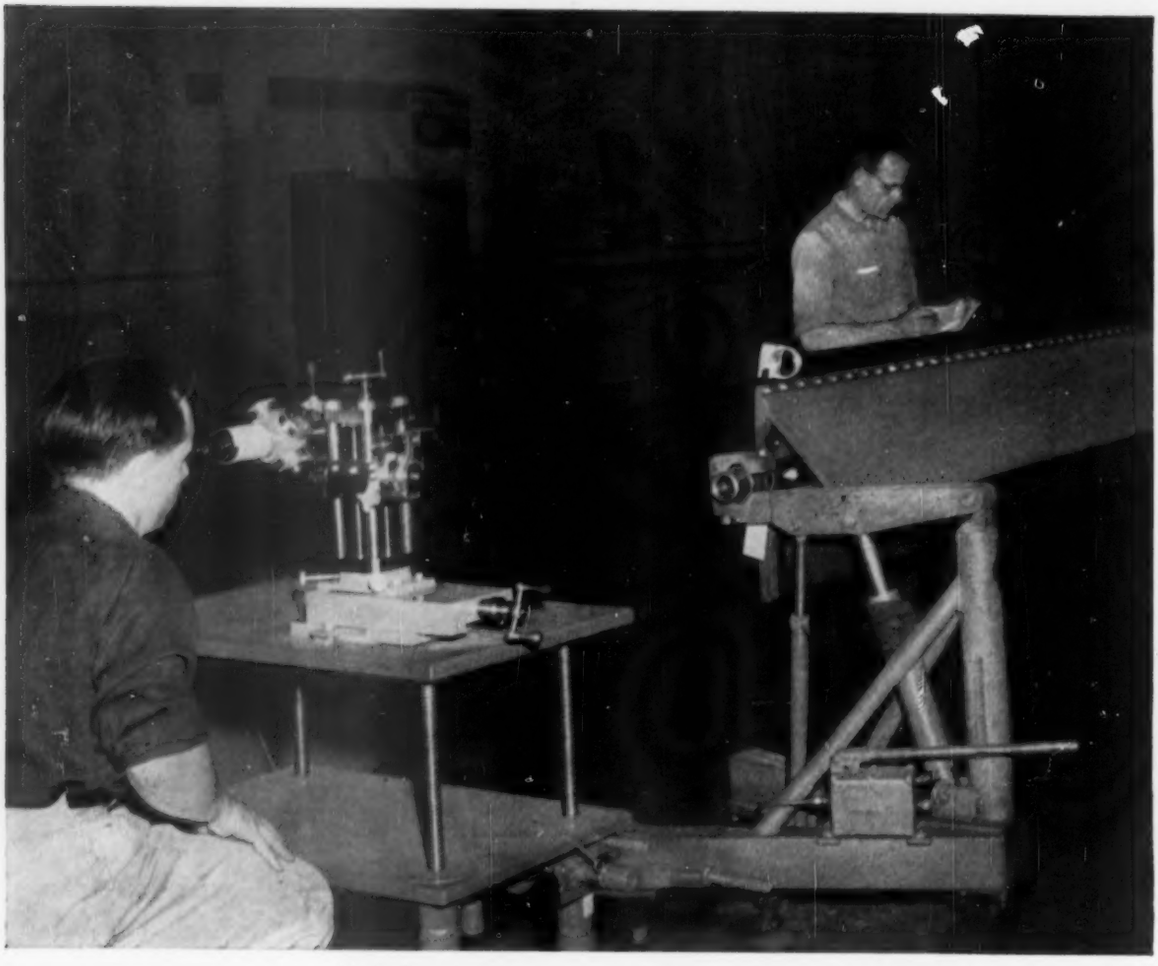
MIXCO fluid mixing specialists

Get these helpful facts on mixing: cost-cutting ideas on mixer selection; best type of vessel; installation and operating hints; full description of LIGHTNIN Mixers. Free—no obligation. Just check data you want, tear out and mail to us today with your name and company address.

- ☐ B-102 Top Entering Mixers (turbine, paddle and propeller types)
- ☐ B-103 Top Entering Mixers (propeller types)
- ☐ B-104 Side Entering Mixers
- ☐ B-107 Mixing Data Sheet
- ☐ B-108 Portable Mixers (electric and air driven)
- ☐ B-109 Condensed Catalog (complete line)
- ☐ B-111 LIGHTNIN Rotary Mechanical Seals
- ☐ B-112 Laboratory Mixers

MIXING EQUIPMENT Co., Inc., 141-n Mt. Read Blvd., Rochester 11, N. Y.

In Canada: Greey Mixing Equipment, Ltd., 100 Miranda Ave., Toronto 10, Ont.



Optical test. With doctor in working position, inspector at Lodding Engineering Corporation checks "K" Monel blade for straightness. "K" Monel is extra strong, extra hard. It offers high resistance to wear and corrosion . . . and does not feather-edge.

Blades made of "K" Monel...*

pass all on-the-job tests, too!

Frequent changes of doctor blades — you know what they do to production schedules and costs!

Why let them — when LODDING ENGINEERING CORPORATION makes blades of corrosion-resisting "K" Monel age-hardenable nickel-copper alloy?

"K" Monel blades run two to five hours between grinds, depending on the paper you're making. Their surfaces stay smooth . . . wear uniformly. Your rolls are left clean and unscored. There's no fibre buildup. No scratching. And they last lots longer than most blades.

LODDING recommends "K" Monel. For all types of creping service. For nearly all metal rolls on your paper machines. *See how "K" Monel helps to keep your production up . . . and to hold your costs down.*

LODDING ENGINEERING CORPORATION, makers of quality blades, can supply your needs for all types of "K" Monel doctors. Write Lodding — Dept. K; Worcester, Mass. — for more information. And write us for help in picking the right metal for any corrosive job in your mill!

*Trademark

THE INTERNATIONAL NICKEL COMPANY, INC.
67 Wall Street New York 5, N.Y.

INCO TRADE MARK

50 YEARS OF *Nickel Alloy Progress* PIONEERED BY MONEL 1905 - 1955

"K" Monel... *for longer life*

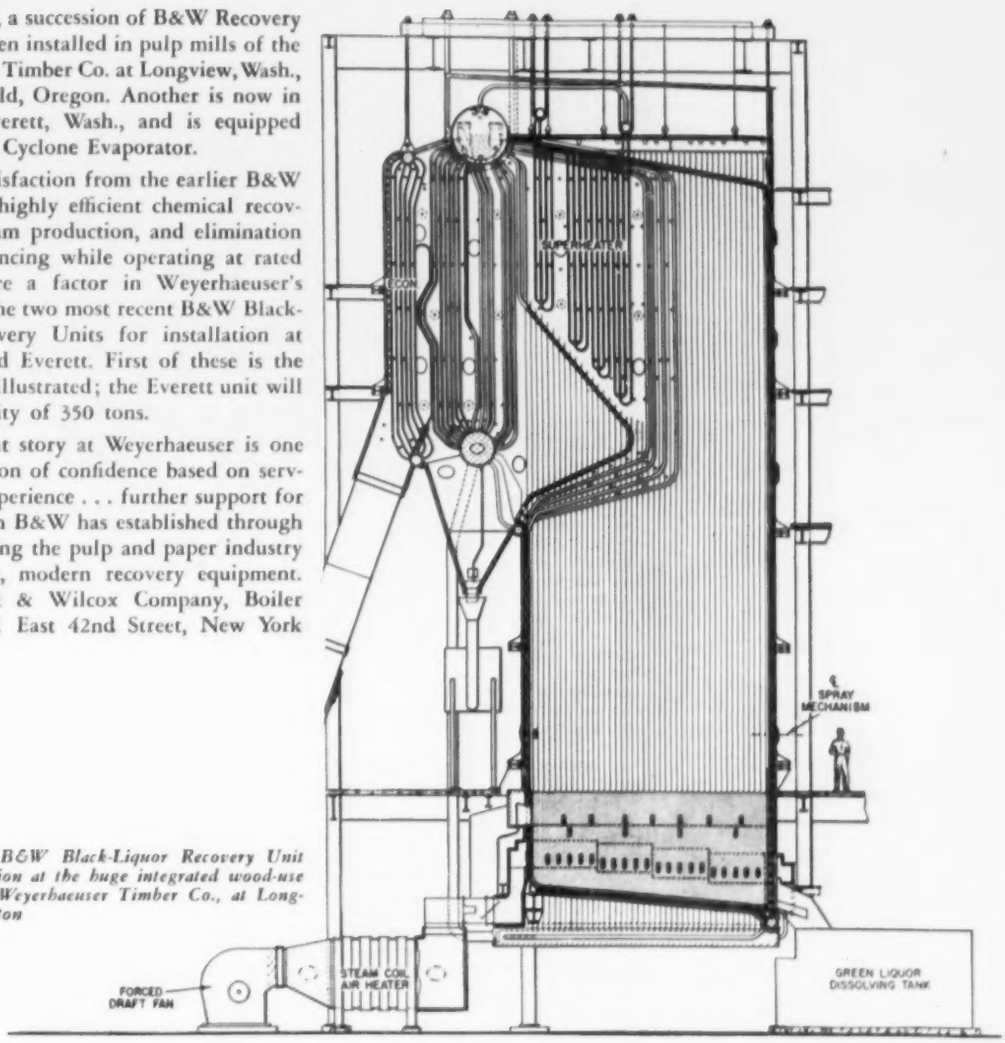
6 B&W RECOVERY UNITS SERVE 3 MILLS OF WEYERHAEUSER

PULP DIVISION

Since 1945, a succession of B&W Recovery Units have been installed in pulp mills of the Weyerhaeuser Timber Co. at Longview, Wash., and Springfield, Oregon. Another is now in service at Everett, Wash., and is equipped with a B&W Cyclone Evaporator.

Service satisfaction from the earlier B&W Units—their highly efficient chemical recovery, high steam production, and elimination of routine lancing while operating at rated capacity—were a factor in Weyerhaeuser's selection of the two most recent B&W Black-Liquor Recovery Units for installation at Longview and Everett. First of these is the 300-ton unit illustrated; the Everett unit will have a capacity of 350 tons.

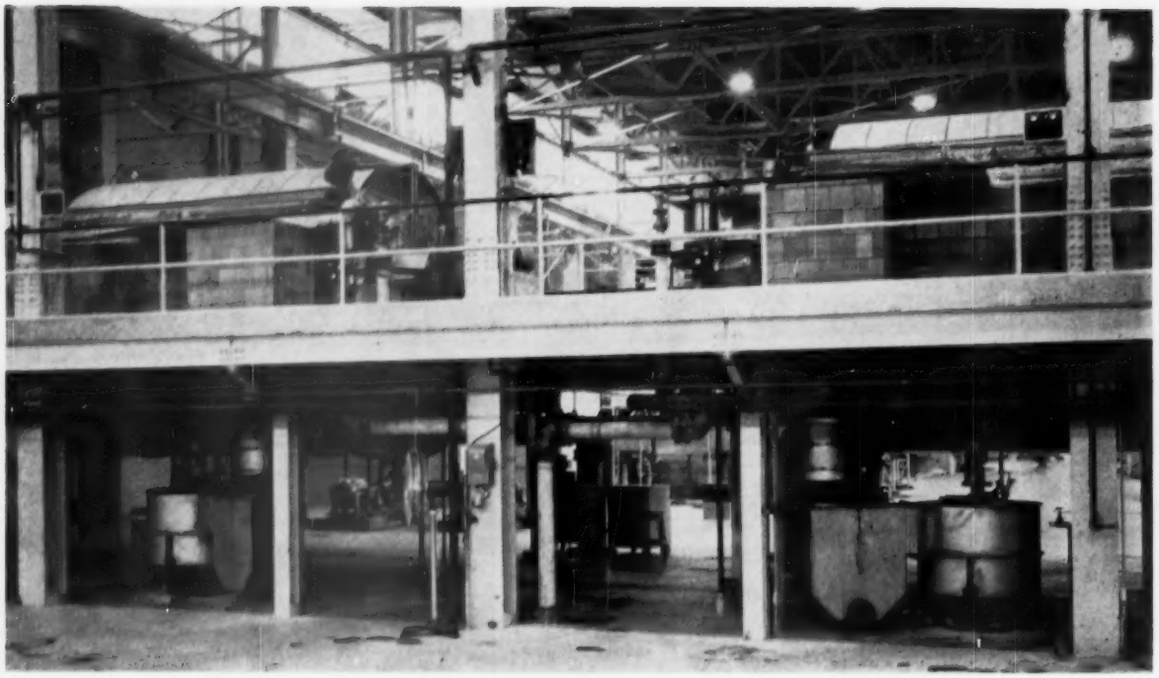
This repeat story at Weyerhaeuser is one more indication of confidence based on service-proved experience . . . further support for the reputation B&W has established through years of serving the pulp and paper industry with efficient, modern recovery equipment. The Babcock & Wilcox Company, Boiler Division, 161 East 42nd Street, New York 17, N. Y.

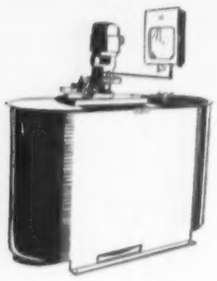


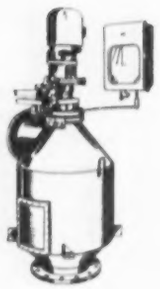
New 300-ton B&W Black-Liquor Recovery Unit now in operation at the huge integrated wood-use center of the Weyerhaeuser Timber Co., at Longview, Washington

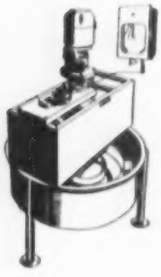
BABCOCK & WILCOX

P-783









DeZURIK AUTOMATIC RECORDING CONSISTENCY REGULATORS

In many thousands of installations, DeZurik Automatic Recording Consistency Regulators are giving dependable, accurate, automatic service. Modern instrumentation plus a highly responsive mechanism achieves maximum accuracy with minimum attention.

DeZurik Regulators are guaranteed to hold consistency to within limits of plus or minus .1%. (However, many DeZurik Regulators in operation directly ahead of paper machines are holding consistency to plus or minus .02%!) Performance is not disturbed by spattering stock. A single knob adjusts the entire system.

A detailed chart-record of every 24-hour period (illustrated at right) reflects both incoming and outgoing stock consistencies as well as stock-system variations.

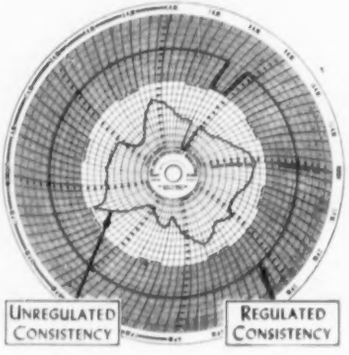
The three basic types illustrated at left can be adapted to every requirement. The Stuff Box type is most readily adapted to installation ahead of a paper or board machine, or ahead of a finishing refiner.

The Pipe Line type is used on systems under pressure. The regulator handles the entire volume of stock, thus utilizing the full capacity of the pump.

The Pan type regulator is designed to take gravity flow of stock from washers, deckers, save-alls, etc.

Also available: The DeZurik Closed Stock System for Paper Machine Supply, providing improved sheet formation, higher machine operating speed, elimination of air from the system, completely remote operation and other advantages in an engineered, low cost package unit.

Write for complete information on DeZurik Consistency Regulators.



DeZURIK SHOWER COMPANY
Sartell, Minn.

Just try to avoid paperwork

In spite of efficiency experts, we're using more paper than ever before. The fact is, within the next ten years, pulp and paper producers are faced with the problem of doubling their output. This presents a challenge to the chemical industry too, since it requires about one ton of chemicals to produce four tons of paper.

Working closely with the pulp and paper industry, Olin Mathieson offers invaluable assistance through a long-range program of *coordinated planning and production*. This assures the availability of chemical raw materials regardless of changing market conditions; assures adequate chemical production to supply growing industrial capacity; speeds the development of new chemical products and processes; provides greater flexibility in shipping and handling of materials; provides the personal attention of recognized product experts backed by widely diversified research facilities.

Currently, a growing number of chemical consumers are coordinating their planning and production with Olin Mathieson . . . America's prime producer of basic industrial chemicals. Olin Mathieson's long experience and familiarity with the broad market picture will prove invaluable in your planning. Why not consult with us *now?*

MATHIESON CHEMICALS

OLIN MATHIESON CHEMICAL CORPORATION

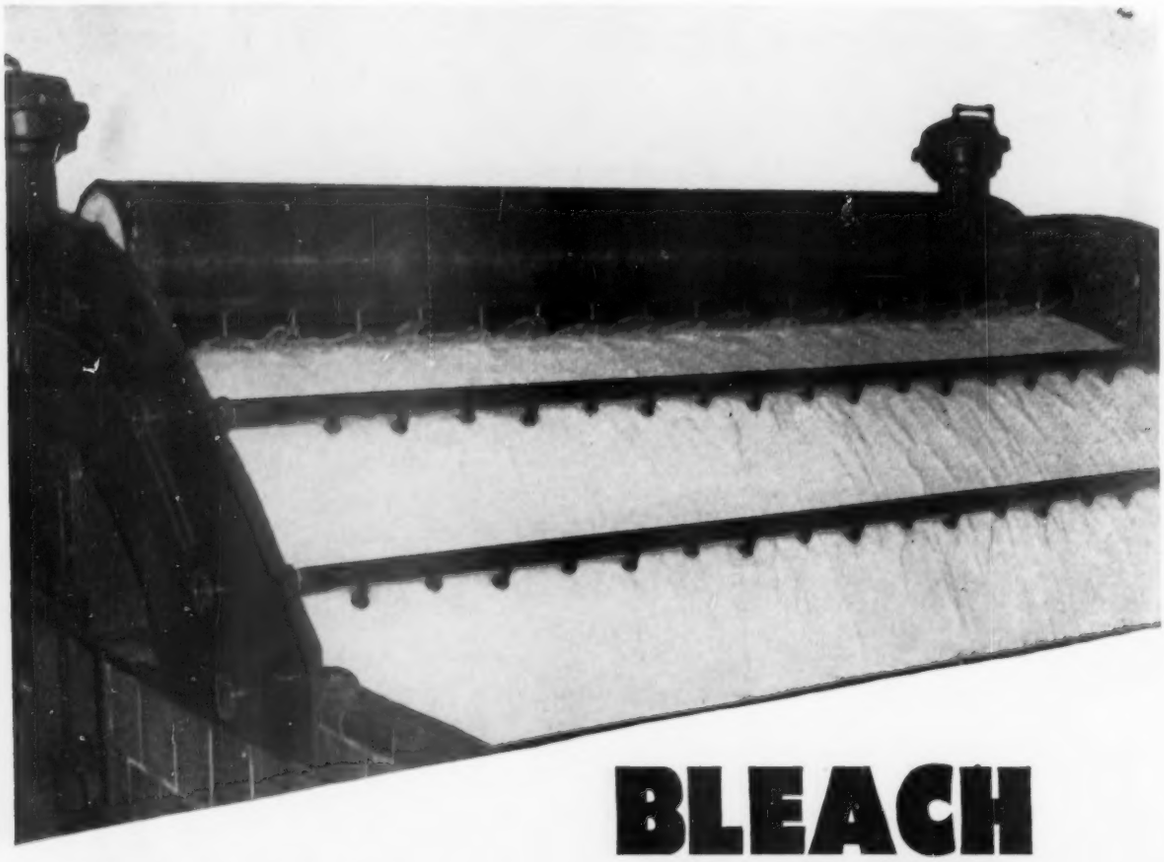
INDUSTRIAL CHEMICALS DIVISION • BALTIMORE 3, MD.

3267

MATHIESON

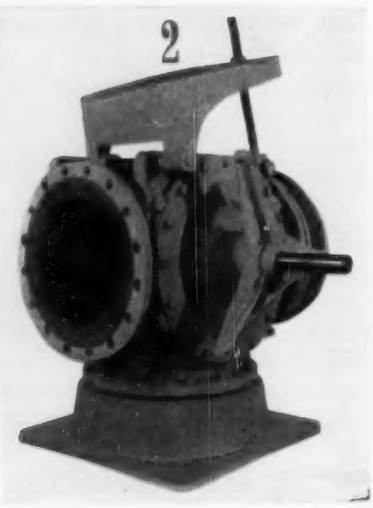
INORGANIC CHEMICALS: Ammonia • Bicarbonate of Soda • Carbon Dioxide • Caustic Soda • Chlorine • Hydrazine and Derivatives • Nitric Acid Hypochlorite Products • Nitrate of Soda • Soda Ash • Sodium Chlorite Products • Sulphate of Alumina • Sulphur (Processed) • Sulphuric Acid

ORGANIC CHEMICALS: Ethylene Oxide • Ethylene Glycols • Polyethylene Glycols • Glycol Ether Solvents • Ethylene Dichloride • Dichloroethylether Formaldehyde • Methanol • Sodium Methylate • Hexamine • Ethylene Diamine • Polyamines • Ethanolamines • Trichlorophenol • Trichlorobenzene



IMPCO BLEACH PLANT EQUIPMENT

● Sherbrooke Machineries Limited, Sherbrooke, Quebec Manufactures Similar Equipment in Canada



IMPCO manufactures virtually all types of mechanical bleach plant equipment for new and old plant application. These component parts are readily adaptable for re-vamping existing plants, no matter what the sequence is or is planned to be. We welcome the opportunity to work with you and if necessary tailor the equipment to best satisfy your needs.

We have long recognized the fact that there is no such thing as a standard continuous bleach plant nor are we wedded to any particular sequence flow with corresponding arrangement of equipment. We will continue to develop equipment best suited to do your job.

1 **Bleach Washers**—Impco Vacuum Washers give highest washing efficiencies at low fresh water consumption. Every Impco Washer is "Tailored-for-the-job." Made in 3' - 5' - 8' - 9'6" and 11'6" diameter sizes up to through 20' lengths, in any material of construction.

2 **Line Mixers**—This low-density wabble plate chemical and chlorine Saver-Mixer provides a rapid mixing result which improves retention uniformity with a big savings in chemicals.

3 **Single Shaft Mixers**—This single shaft mixer built of solid hastelloy was developed for mixing liquid ClO_2 with hi-density pulp. Its single hastelloy rotor contained in a specially designed case delivers uniformly mixed pulp and chemical at the critical moment of reaction.

4 **Scraper-Screw Dischargers**—The unit pictured here is used in continuous down-flow type high density bleachers. Developed over twenty-five years ago, this mechanism offers the most positive and fool proof method of high density stock removal.

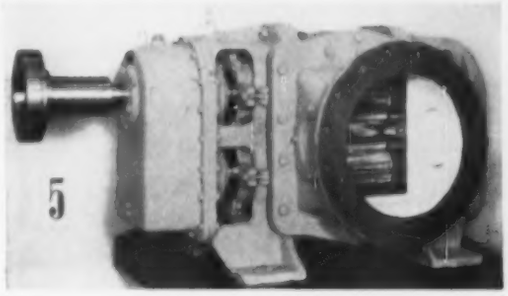
5 **Thick Stock Pump**—This positive displacement double rotor pump in solid type #316 stainless construction easily handles stock consistencies from 10% A.D. to 17% A. D. Built in two sizes, the series 300 will handle 350 T.P.D. and the series 500 will do 600 T. P. D. plus. This unit is used in virtually every ClO_2 bleach plant today and has a definite application in high density storage work.

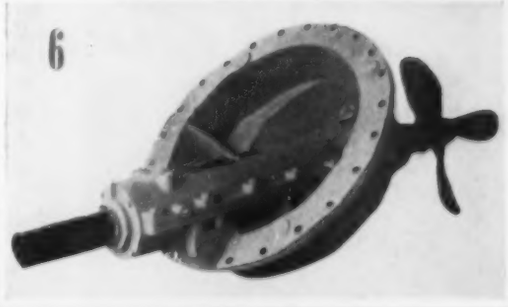
6 **Pulp Circulators**—Built in three sizes in a combination of any acceptable materials for bleach plant work, this specially designed propellor circulator eliminates radial projection and puts the horizontal propulsion factors to work—Result?—A down flow high density bleacher that delivers uniformly, making short circuiting ancient history.

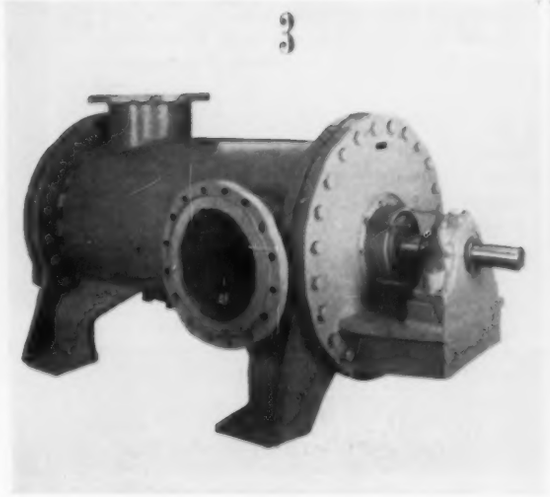
7 **Double Shaft Mixers**—These work horses of the bleach plant, rugged in design and thorough in their job of surrounding the individual fibre with chemical, continuously and intimately mix the chemical, steam and pulp through special internal features. Repeated field tests indicate thorough mixing in pieces of pulp as small as 25 milligrams in particle size.

IMPROVED
MACHINERY INC.
NASHUA, NEW HAMPSHIRE

IMPCO

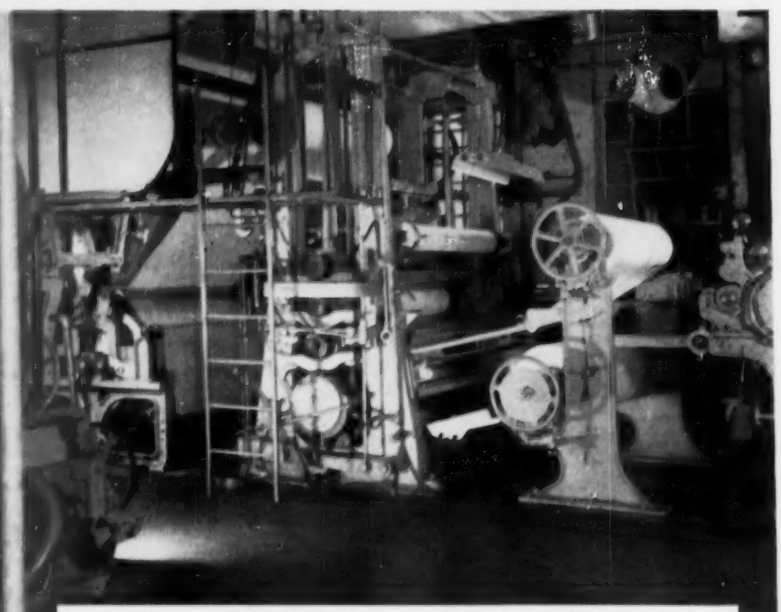






Cut Weight Variation as much as 40%

"Packaged" Control Cabinet above includes Basis Weight Controller (top) and Stock Gate (or Valve) Position Recorder (below).



...with continuous, stepless automatic Foxboro Control of Basis Weight

Here's outstanding assurance of uniformity that's possible only when basis weight is put under continuous, automatic Foxboro control. Users report up to 40% reductions in basis weight variations!

Only this system takes its continuous machine-direction measurement across a *wide* averaging strip (14"). The special measuring circuit is self-compensating for deterioration of the radioactive material, and for changes in atmospheric pressure and temperature. Moreover, the operator merely turns a knob to preset the desired weight value.

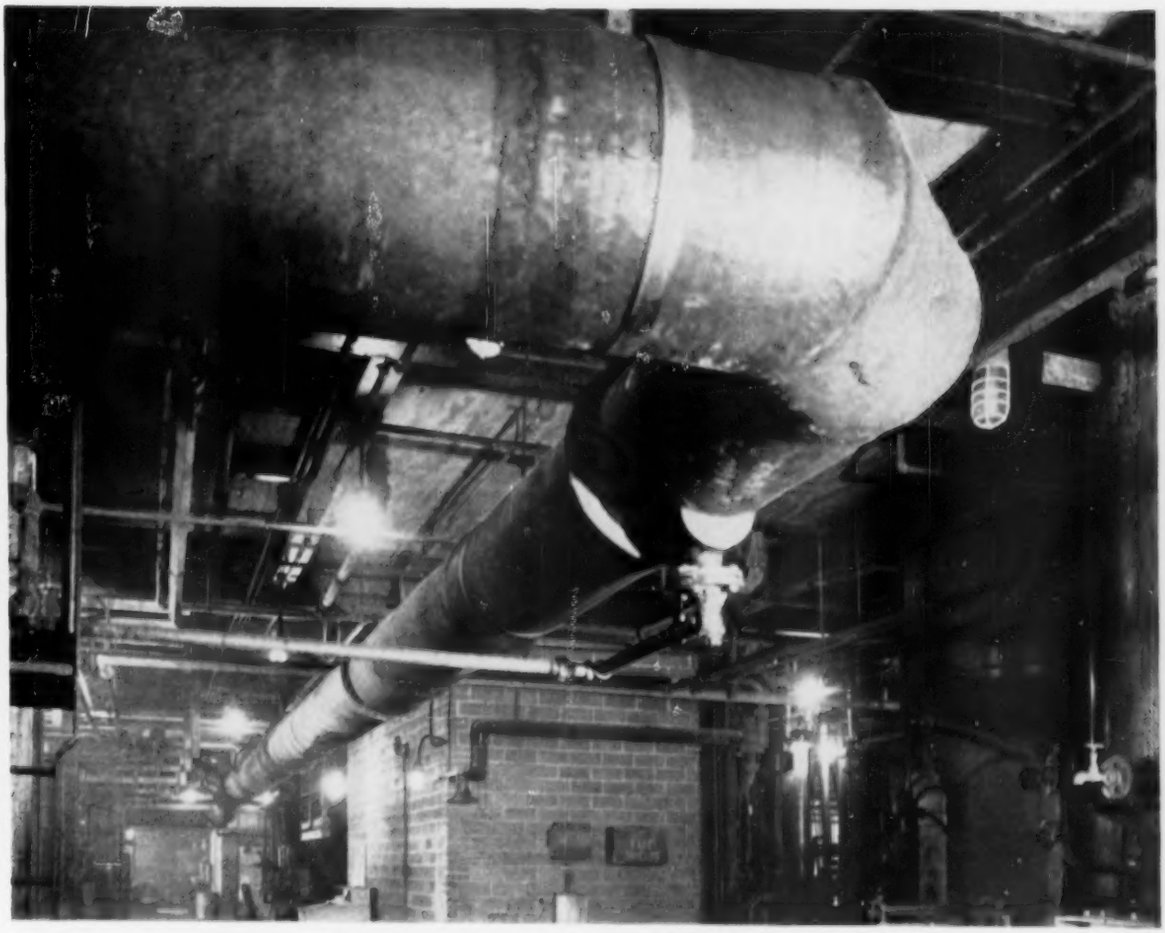
Send today for new literature: Bulletin PD-108 describes this unique Basis Weight Control System; Bulletin PD-105-2 describes the measurement of entirely independent *across-the-sheet* weight variations with the Sheet Weight Profiler.

THE FOXBORO COMPANY, 9912 NEPONSET AVENUE, FOXBORO, MASSACHUSETTS, U. S. A.

FOXBORO
REG. U. S. PAT. OFF.

Beta-Ray Basis Weight Control

FACTORIES IN THE UNITED STATES, CANADA, AND ENGLAND



THIS COST-CUTTING DUCTWORK is made by *duVerre*, Buffalo, N. Y. We supply only the HETRON resins that go into its manufacture.

Fire-safe polyester ductwork

takes big bite out of corrosion costs

Ductwork like this, made from HETRON® polyester, safely handles acid fumes that can eat through metal ducts in a few weeks.

This ductwork has great structural strength and impact strength. It's so light that one man can pick up an 18-foot-long, one-foot-diameter section and walk away with it. Yet in the long run it costs less than anything else available for handling corrosive fumes and smoke!

And this ductwork is *fire resistant*—so it is being installed in many plants where polyester could not have been used before.

Custom-built system

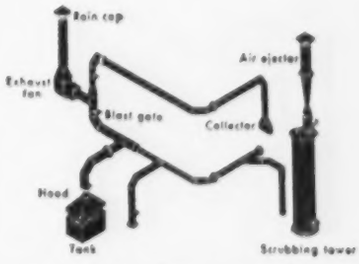
You can get a whole ventilating system—complete with fume hoods, blowers, scrubbing towers, air ejectors, fittings—made out of this fire-safe polyester.

It withstands most acids and many common organic materials and gases, wet or dry, over a wide range of temperatures, with little or no appreciable attack.

It's assembled quickly on the spot, from large sections custom-molded to fit your requirements. This eliminates many of the flanged and coupled parts needed in conventional ductwork, and cuts installation labor cost. Joints can be cold welded permanently with resin, or flanged and bolted to permit access to ducts.

Won't support flame

This ductwork is a new example of the many uses HETRON fire-resistant resins are finding in industry. This new material of construction is inherently self-extinguishing. Parts made with HETRON will burn slightly under a blowtorch flame, but snuff out as soon as the flame source is removed. The resins combine permanent flame resistance with outstanding flexural strength, tensile strength, resistance to heat and weathering, very low water absorption.



We shall be glad to supply you with the names of reputable fabricators producing this type of equipment.

For complete data file on HETRON resins, write us.

1905—Half a Century of Chemicals
From the Salt of the Earth—1955

HOOKER ELECTROCHEMICAL COMPANY
2 UNION STREET, NIAGARA FALLS, N. Y.

NIAGARA FALLS • TACOMA • MONTAGUE, MICH. • NEW YORK • CHICAGO • LOS ANGELES

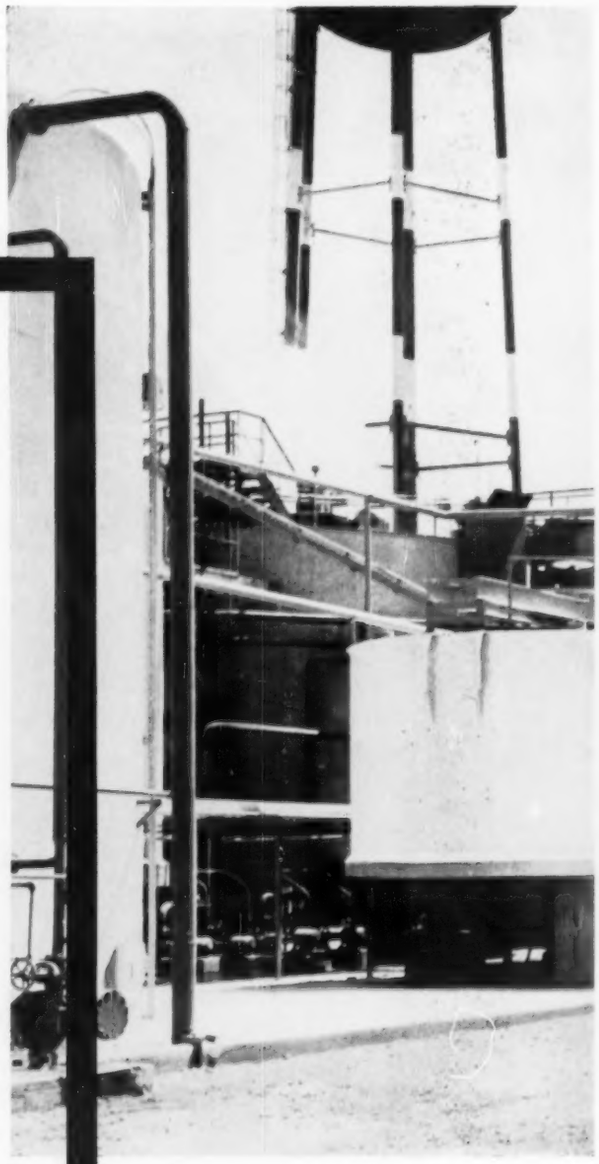
HOOKER CHEMICALS

New Development

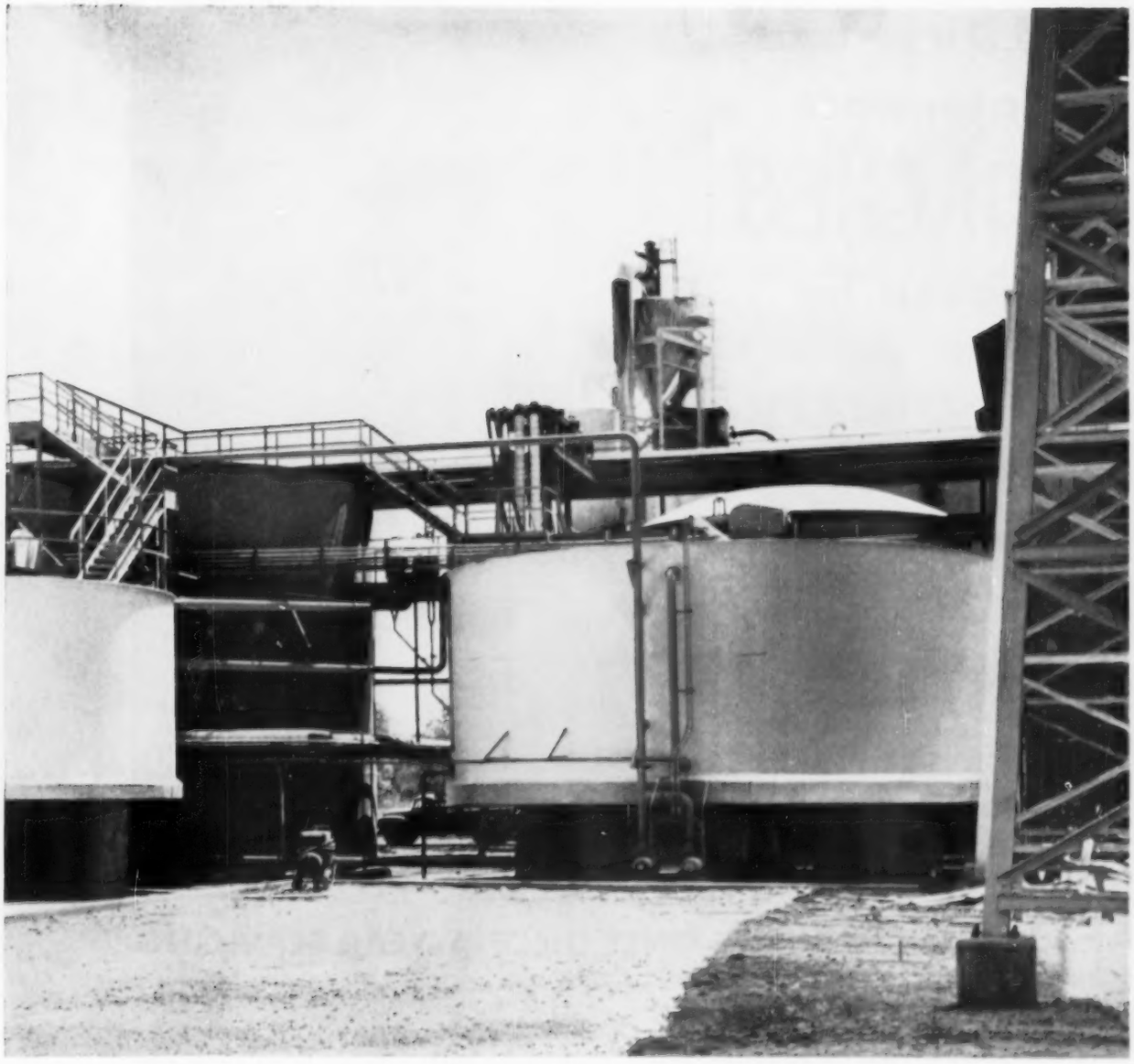
in Dorr Continuous Recausticizing System

Substantially Reduces Initial Costs...

Simplifies Operation



Latest development in Dorr Continuous Recausticizing is embodied in the Green Liquor Clarifier and Dregs Washer shown in the photograph above. Installed at the Valdosta, Georgia mill of National Container Corporation, the units incorporate a new principle which makes possible a saving of up to 50% in mechanism and tank costs. Instead of multiple compartments served by separate mechanisms, each unit now consists of a single compartment with one mechanism and incorporating a large diameter deep feedwell extending well down toward the bottom of the tank.



The ratio of depth to tank diameter is adjusted to bring into balance the various functions essential to good clarification. Hydraulically, the flow patterns produced are controlled to make maximum utilization of overall tank volume.

This recently proven principal of Selective Density Feeding as applied to the Dorr System means substantially lower investment costs, lower maintenance costs, and simplified operation. In existing Systems the green liquor station can be converted to this new unit design and in most cases will give equal performance to that of tray units with the added advantage of greatly simplified operation.

The remainder of the Dorr System at Valdosta is standard in all respects and includes two Oliver Lime Mud Filters, both 6′ diameter by 6′ face.

If you'd like more information on these new developments in the Dorr Continuous Recausticizing System, write Dorr-Oliver Incorporated, Stamford, Conn. In Canada, 26 St. Clair Ave. E., Toronto 5.

Dust, Dirt—and Maintenance HEADACHES Removed by Roll-O-MATIC

AAF AIR FILTER REQUIRES ONLY ONCE-A-YEAR SERVICING

THE filter curtains of this two-section ROLL-O-MATIC were once as white as the paper held in the man's hand. Now, note the gradation of color from light gray to black on the curtains' surface. When the accumulated dust load increases operating resistance to a predetermined level, ROLL-O-MATIC takes matters into its own hands—introduces automatically just the right amount of clean media from the rolls at top, while the dust laden media is re-rolled at the bottom.

No one has to guess when or how much clean media is needed. No bells clang or red lights flash to summon a maintenance crew. The ROLL-O-MATIC "just keeps rolling along" cleaning the air and itself automatically.

A 65 ft. length of ROLL-O-MAT media compresses into a compact roll only 13" in diameter. Under normal operating conditions, a single roll represents a *full year's supply* of clean air for a ROLL-O-MATIC section up to 11 ft. high (18000 cfm). Its cost—just half that of disposable filters of equal capacity. Its savings—countless maintenance man-hours plus the "worrying time" of management.

For complete information on this proven renewable media air filter, call your local AAF representative or write for ROLL-O-MATIC Bulletin 248.

AAF
herman nelson

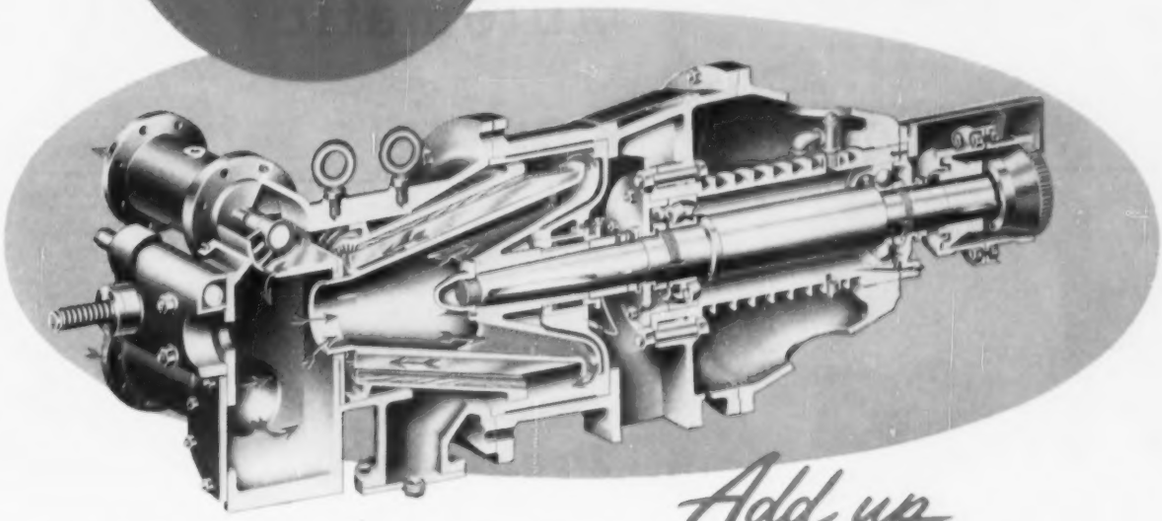
American Air Filter
COMPANY, INC.

297 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

AFI MEMBER

MORDEN *Stock-Maker*

combines the best time-proven beating principles into one simple versatile machine.



Hundreds of "Stock-Makers" throughout the world, operating on all types of pulps and grades of paper, have proven the effectiveness and efficiency of "Stock-Maker" beating—from light brushing for soft tissue, to medium treatment for writings, wrappings, etc., on up through extreme hydration for greaseproof and carbon.

"Stock-Makers" can be used advantageously for continuous, single-pass, closed-system beating, direct to the paper or board machine. They can be readily adjusted to handle many variations in treatment requirements.

Add up

these advantages over conventional beaters

- **REQUIRES 1/2 THE POWER PER TON**
- **REQUIRES 1/3 THE SPACE**
- **REQUIRES NONE OF THE LABOR**
- **SAVES MAINTENANCE COSTS**

the Answer... MORDEN-IZE!

MORDEN SLUSH-MAKER FOR PULPING
MORDEN STOCK-MAKER FOR BEATING
MORDEN STUFF-MAKER FOR JORDANING

GET ALL THE FACTS!
Send for "Stock-Maker" brochure.

Northeastern States Representatives:
ORTON CORPORATION, Fitchburg, Massachusetts

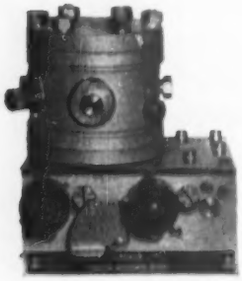
Midwestern States Representatives:
DAN B. CHAPMAN, Appleton, Wisconsin

Other Representatives in most paper-making countries.

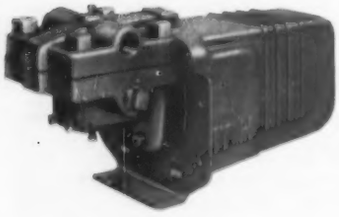
MORDEN
STOCK PREPARATION EQUIPMENT
MACHINES COMPANY
3420 S. W. MACADAM PORTLAND OREGON

Condenser Temperature Controller

2-Pen Pressure Controller and Differential Pressure Recorder



***Tel-O-Set** Controller*



Differential Converter

Honeywell automatic control *for* ***Ross Midwest Fulton Drainage System*** improves dryer

Outstanding features of control system:

Foolproof operation

Minimum pressure differentials between sections are maintained automatically by tamper-proof adjustments. The only way for the operator to override these adjustments is to switch to manual control.

Improved quality

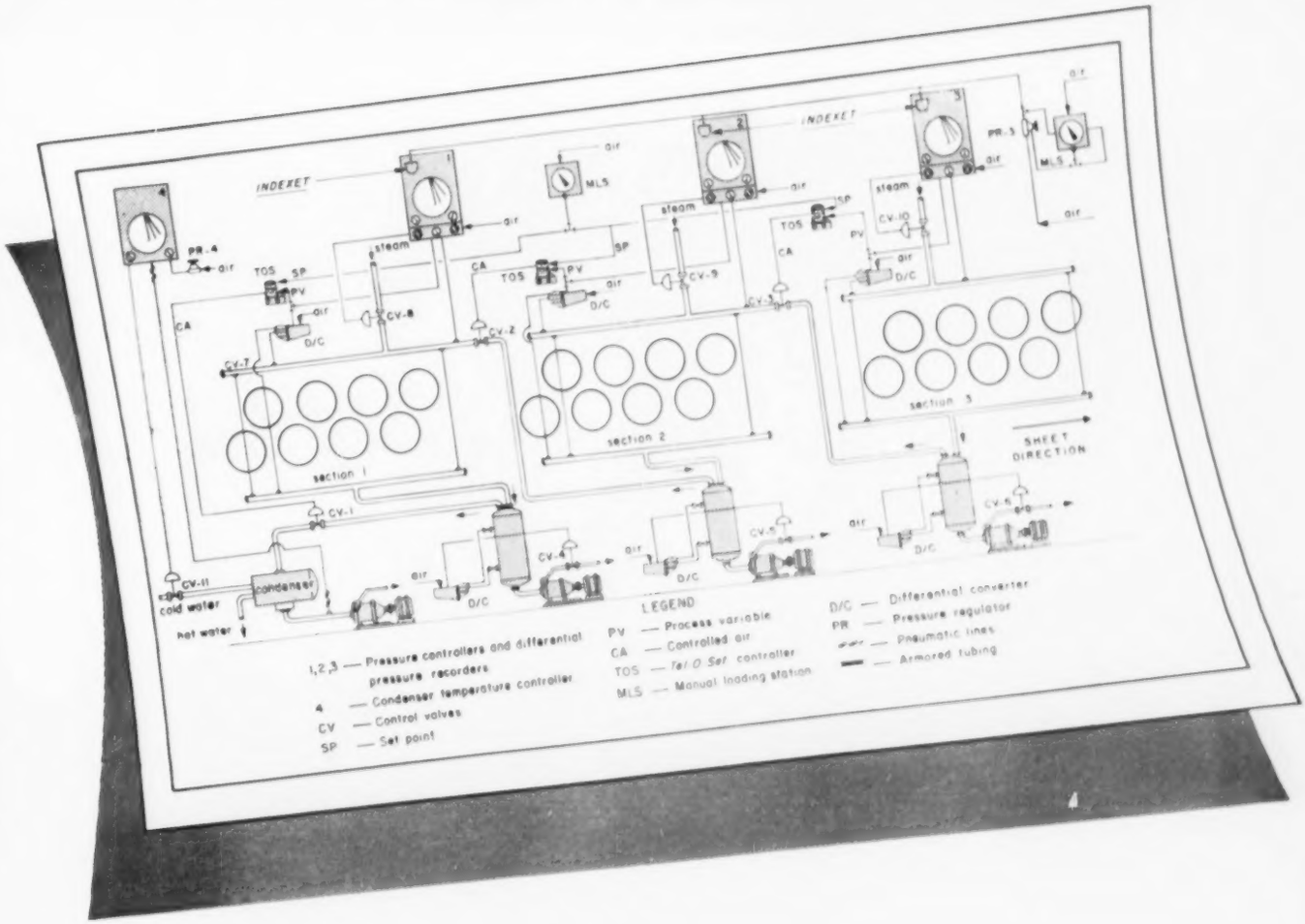
Break switches can be tied into the system to lower by a preset amount the #3 section's set point, and raise it after the break to the original setting . . . all automatically. This minimizes the amount of overdried paper on the next threading.

Fewer instruments

Only one recording controller is required per section to record and control section pressure and record differential pressure across the section.

Automatic control

The ultimate in automatic control is provided to give the most accurate control over the full range of pressures and flows. This reduces the need for the operator to go to manual control



operation . . . saves steam

A NEW Honeywell control system for dryer drainage systems provides papermakers with outstanding benefits. Engineered specifically for Ross Midwest Fulton Corp., the instrumentation represents a basic control system which can be changed to fit the requirements of any given installation.

Integrated Honeywell instrumentation assures high control accuracy. Sensitive Brown 2-Pen Pressure Controllers and Differential Pressure Recorders, a Brown Condenser Temperature Controller, plus Honeywell *Tel-O-Set* Controllers and *Differential Converter* transmitters are all geared to operate the dryer drainage system at peak efficiency . . . to reduce steam consumption automatically.

Automatic moisture control can also be tied into this system, simply by replacing the manual loading station on the Number Three Section with a *Moist-O-Graph* Control System.

The ultimate in flexible automatic control, the new system is designed to eliminate all but the absolutely essential manual operation. Interlocking controls make the system simple, easy to understand and operate by mill personnel. The entire system can be regulated from one knob, or each section can be regulated independently from its individual controller.

Your Honeywell sales engineer will be glad to discuss automatic temperature control for your drainage system in cooperation with Ross Midwest Fulton. Give him a call . . . he's as near as your phone.

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Honeywell
BROWN INSTRUMENTS
First in Controls

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Ed Vanderlinden is typical of the steady, long-experienced workers at the Appleton Woolen Mills . . . a 73-year-old organization dedicated to development, progress, and the production of ever finer felts—for the finest paper-making.

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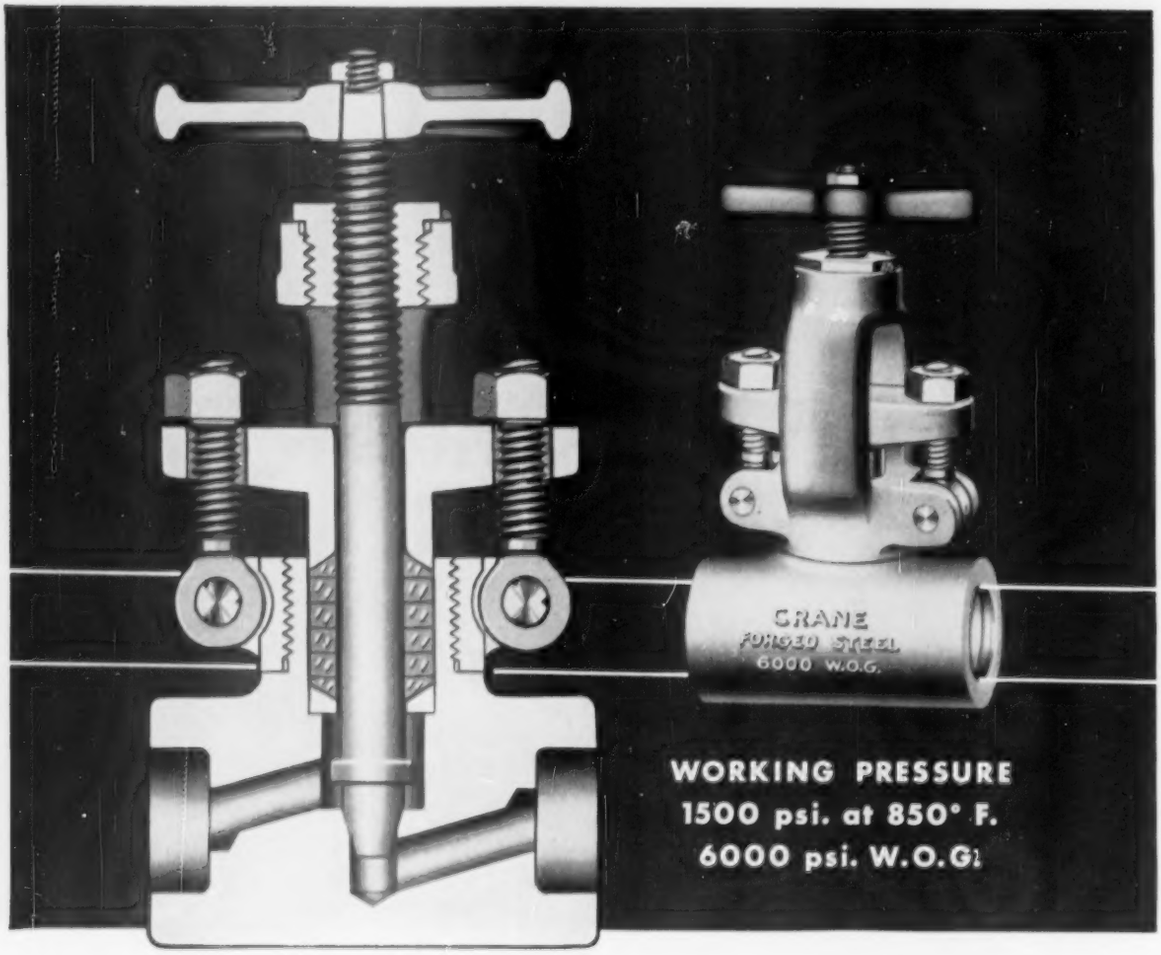

New Crane Forged Steel Instrument Valves

Been looking for an exceptionally rugged, compact, and low-priced stop valve for your small hydraulic or high-pressure, high-temperature instrument lines?

Crane has developed it—sizes ¼", ⅜" and ½", in both screwed and socket-welded patterns. It's the all-new Crane Forged Steel Instrument Valve, and you can specify it now for immediate delivery.

Will Handle Many Services

Note closely the over-all design and construction shown above of this new Crane valve. Oversized stuffing box—heavy-duty Crane Exelloy stem with integral disc—bolted gland—swinging gland eye bolts—outside screw and yoke construction—all add up to the high performance and low maintenance you want in a valve for your instrument panels, orifice meters, bypass and gauge lines, regulator leads, and other hydraulic and high pressure/temperature lines.

Literature on Request

These rugged, low-cost stop valves are built for 1500 psi. at 850° and 6000 psi. W.O.G. Construction and materials are job-engineered by Crane experts—backed by a century of quality manufacturing, matchless experience. You'll want complete information on the all-new Crane Forged Steel Instrument Valves. Contact your Crane Representative, or write to Crane Co., General offices, Chicago 5, Illinois—Branches and Wholesalers serving all industrial areas.

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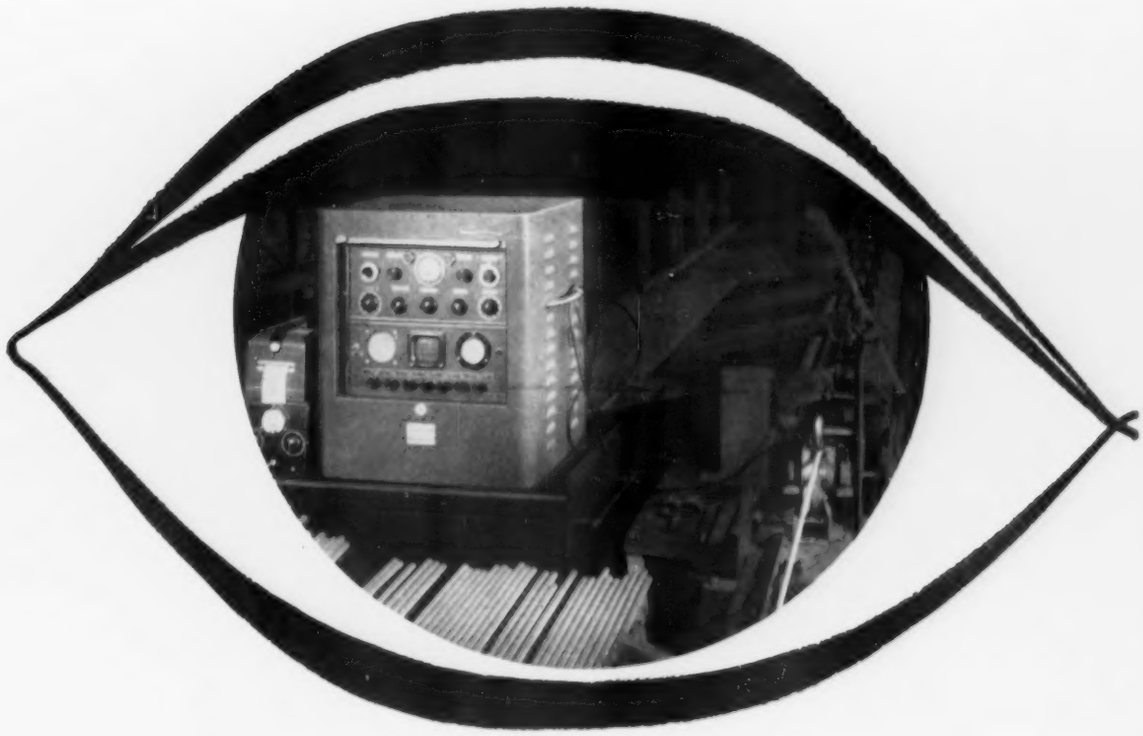
CRANE'S FIRST CENTURY...1855-1955



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GIVES YOU THE HIGHEST DEGREE OF PERFECTION POSSIBLE IN STAINLESS TUBING!

Now, minute tubing defects invisible to the human eye . . . even those not detectable by any other production non-destructive testing method, will not escape the penetrating eye of a new non-destructive test in the Carpenter mill.

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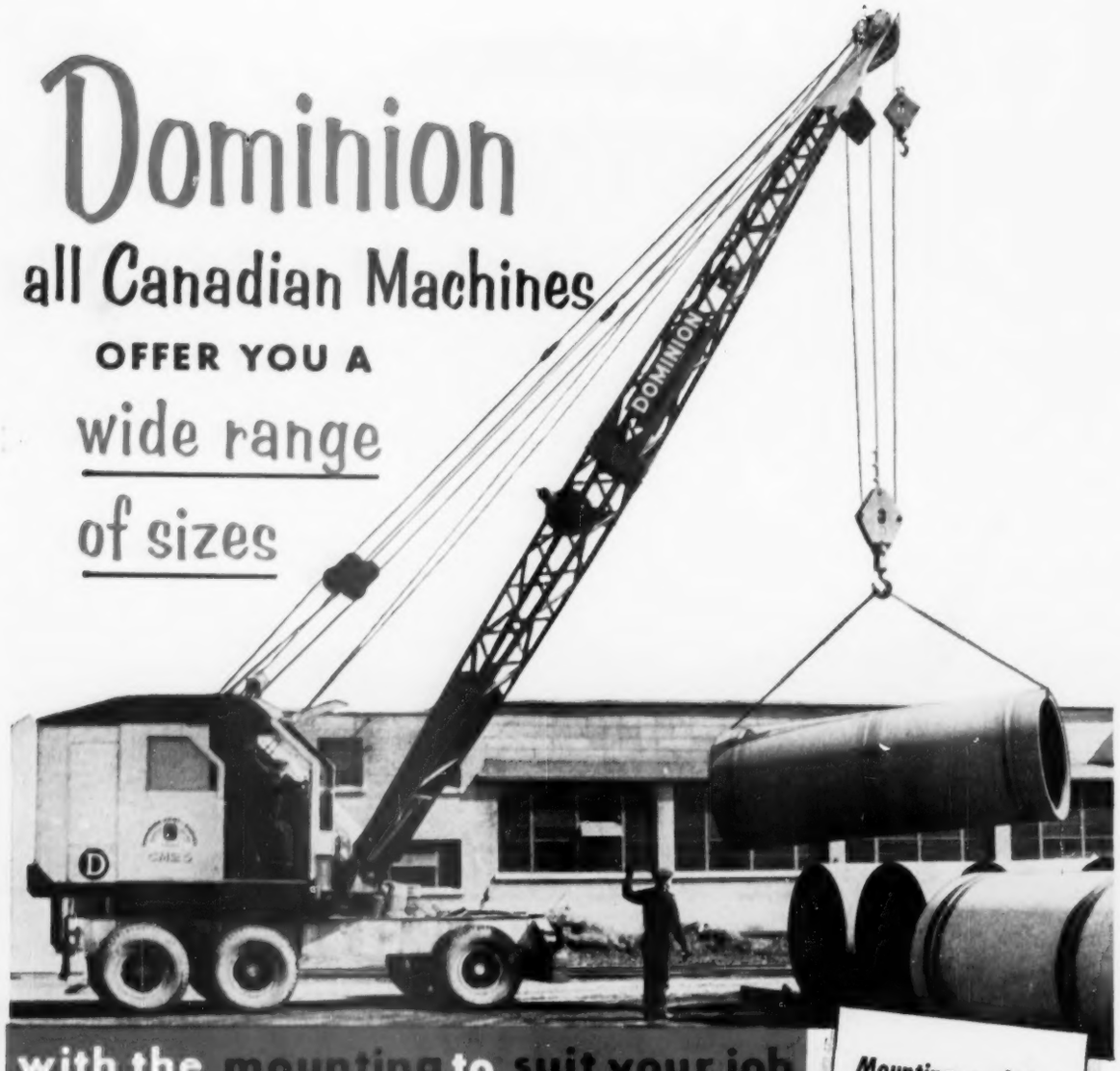

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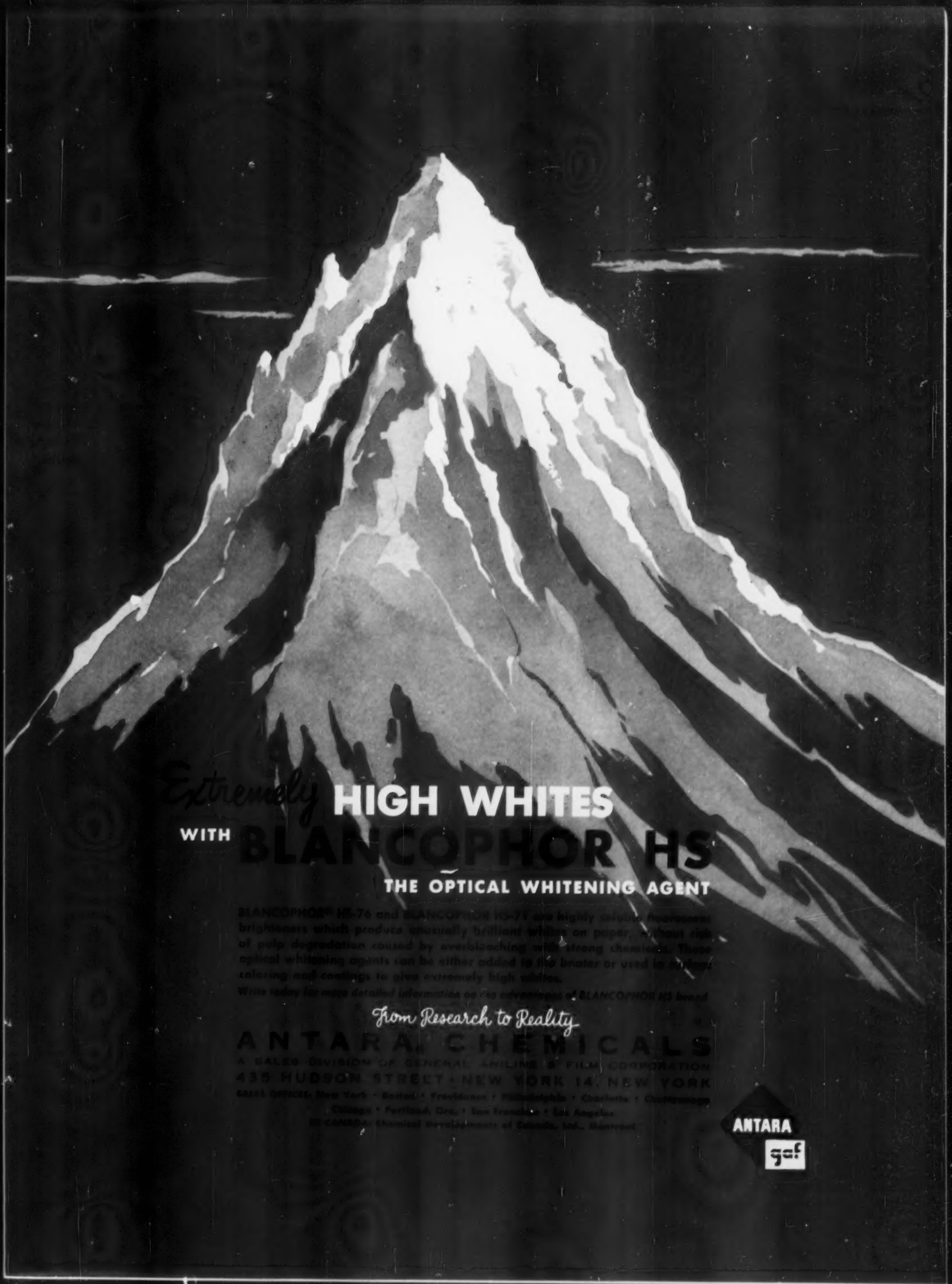
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MESSAGE TO MANAGEMENT—

How To Make Safety Work*

By HOWARD E. WHITAKER
President, The Mead Corp.

• Here we are with an accident rate in our paper industry which we cannot be too proud of—just about average. It is safer to work in an explosives plant or in heavy manufacturing, such as automobiles, or the steel industry, than in a paper mill.

The difference must be in the approach to the problem; perhaps not so much a difference in professional or technical skill—but more probably a basic difference in the degree of determination on the part of top management.

If there is something to this tentative conclusion, it would seem to open the way to a more effective program on our own part. If we can develop an all-out determination in the minds of management to achieve success in safety, we should be able to change the figures in our performance record.

What I am proposing, therefore, is that we direct our efforts toward the front office, the top management—as well as to the men in the mill. That we devote continuously a definite portion of our time and thought to the matter of ways and means of getting the management of our organizations to exert their authority toward improvement of safety.

Safety reports to the top executive must be brief, concise, pointing out in sharp relief the major objectives. A most important element in such a report is a timetable for action—definite dates for getting certain things done. Give the chief executive something clear-cut to use as a standard for performance and recommend a forward dating for a review of the record, a means for placing responsibility for action on specific individuals.

I believe that every activity in connection with safety can be so scheduled—improved housekeeping, favorable working conditions, educational work, studies of accident hazards, and all the rest. I am convinced that aggressive thinking along these lines, just as it does in sales and in production planning, can be transformed into specific actions; action by top management, action by supervision, action by the entire organization under direct leadership, and will produce results which will change the record.

* From an address on Management Day at 43rd National Safety Congress in Chicago in late October.

In News at National Safety Congress

HOWARD E. WHITAKER, Pres., The Mead Corp., who said it is up to management to make safety work.

ROBERT M. GILMORE (left), Safety Director, Rayonier Inc., new Gen. Chairman of Wood Products Section—this includes pulpwood production in woods and mill yards and wood preparation plants—right up to the pulp mill. His headquarters are Hoquiam, Wash., but he oversees safety in Fla., Ga., Wash. and Brit. Columbia mills, and is first West Coast man to head a section of National Safety Council.
FRANCIS H. WAGNER (right), Director of Safety, The Mead Corp., Chillicothe, O., is new Gen. Chairman of Pulp and Paper Section of Council. He joined Chillicothe Mill's inspection dept. in 1936, became Mill Safety Director in 1946, and Director for all Mead mills in 1949.

Northwest Paper Joins Sulfite Research League

Northwest Paper Co., Cloquet, Minn., has become the first new member admitted to the Sulfite Pulp Manufacturers' Research League since it was organized by 14 Wisconsin and Michigan mills in 1939.

Election of Northwest Paper was announced by Stanton W. Mead, League president, also president of Consolidated Water Power & Paper Co.

U.S. Timber Future

As Forest Service Sees It; and as Critics See FS Report

• There is a substantial balance of new timber growth over drain in the United States, purportedly for the first time this century.

This is the big "news" in a new "Timber Resource Review" completed by the U.S. Forest Service, a 15-volume study, weighing 6 pounds (all in paper). It reports net annual overall timber growth, allowing for timber killed by fire, pests and disease, at 14.2 billion cu. ft. The grand figure for timber cut totals only 10.7 billion cu. ft.

The last USFS report of the kind was that of 1945, showing a slight over-balance of drain over growth. But for ten years the world of wood has heard many criticisms of that appraisal, especially that it did not do right by all lesser species and sizes of trees which have proved so increasingly of commercial value as pulpwood.

This is the 6th appraisal of the nation's timber made by the 50-year-old USFS. It took 3½ years—planning, field work, compilation, summarizing. But there will be many issues raised over this newest appraisal, just as there were over past ones.

As in the past, the inherent nature and purpose of the USFS has caused many critics to see these appraisals, in part, as little-disguised bids for more centralized governmental controls and powers over lands now privately owned.

WHAT HAPPENED IN PORTLAND—The first official report on the Timber Resources Review was presented by U.S. Chief Forester Richard E. McArdle before the largest gathering of professional foresters ever held anywhere in the world—the 55th annual convention of the Society of American Foresters. It brought a record registration of 1,417 (including about 250 wives of delegates) to Portland, Ore., in mid-October.

Among other reports at this meeting, one less publicized, but having an important bearing on the nation's timber status, was by Thomas J. Orr, Weyerhaeuser Timber Co. He said private industry has created 36,000,000 acres in Tree Farms since 1940, each operated as a business, harvested like

Continued on page 110

Year	Domestic Production	Imports	Exports	Total Supply	Population In Thousands	per Capita Consumption in lbs.	Domestic Production Requirements For 410 lbs. Current Rate per Capita	425 lbs. per Capita	450 lbs. per Capita	Industry Capacity 310 day basis
1925	9,001,742	1,541,680	130,204	10,416,512	115,800	180				11,623,450
1939	13,509,642	2,687,484	248,569	15,948,567	130,900	244				16,557,410
1946	19,277,667	3,625,982	393,250	22,510,399	141,200	319				20,420,000
1950	24,375,083	5,007,384	372,739	29,011,306	151,700	382				25,581,000
1955	29,500,000	5,000,000	700,000	33,800,000	165,000	410				30,500,000
1960					180,000		32,900,000	34,300,000	36,500,000	
1965					194,000		35,800,000	37,200,000	39,600,000	
1970					208,000		38,600,000	40,200,000	42,800,000	
1975					225,000		42,600,000	43,800,000	46,600,000	

A Look into Paper's Crystal Ball

"Short-term outlook is bright; long-term outlook brilliant"—present machine plans may not meet 1960 needs

By MORRIS C. DOBROW

Executive Secretary
Writing Paper Mfrs. Assn.

A forecast made before Fall Meeting, Oct. 19, of U.S. Pulp Producers Assn.

• Another new high record is being made by the paper industry in the United States. But that sounds like an understatement. This year's production of paper and paperboard is going to be 29,500,000 tons as against last year's 26,657,000 tons—a gain of about 2,850,000 tons in a single year. This year's production is 11% higher than last year. Paper grades are up 9% from last year and board is up 12%.

At the beginning of this year I didn't expect production to be up more than 1-1½ million tons. I didn't expect 29,500,000 tons until 1956 or 1957. What the statistics show is almost unbelievable. But the gain is not far out of line with gains in industrial production and gross national product (the latter, will be up 8%).

In 1925 total paper output was 9 million tons. In the first postwar year of 1946 it was 19 million tons, and this year it will be 29½ million tons. We had a gain of 20 million tons in the last 30 years. The first ten of the twenty million increase was engendered in 21 years from 1925 to 1946.

MORRIS C. DOBROW—"A machine is built for 30 or 40 years. What it does its first year isn't so important."

The second ten million was added in the last 9 years. It is possible that we shall add another 10 million tons in the next 10 years or so.

This growth has been the result of: 1, growing population; 2, higher standard of living; 3, development of new products and uses; 4, an expanding raw material base.

THE FUTURE—On July 1, 1940, the population of the U. S. was 132,000,000. At present it has risen to 165,000,000. By 1960, it is estimated that it will be 180,000,000. In other words, we shall have added another 15,000,000 to our population in the next 5 years.

This means greater consumption of all goods, including paper, even if per capita consumption does not increase. Our history, in the paper industry, is one of steadily increasing per capita consumption.

Per capita consumption of paper in 1925, when we were producing 9 million tons (plus 1,400,000 net imports), was 180 pounds for a population of 116 million. This year our domestic production of 29,500,000 tons will support a per capita consumption of 410 pounds for 165 million people. I have assumed that net imports will not change very much from the present 4 million tons. While our imports of newsprint from Canada may increase somewhat from the present 5 million tons, I expect our exports of kraft packaging papers to show further increases because we have the lowest costs in the world. I think we shall have some further growth in per capita consumption, but it, undoubtedly, will be slowed down.

Looking ahead, we should proceed on the basis of two projections:

The present per capita consumption of 410 pounds, and the possibility that it might go up to 450 pounds by 1965, or if we use the Paley Report, that it might go up to 500 pounds by 1975. The accepted estimates at the moment are that our population will be 194 million by 1965 and 225 million by 1975.

WHERE DO WE GO FROM HERE?

—If we stay with our current consumption of 410 pounds per capita, the domestic production requirements by 1965 should be nearly 36 million tons and by 1975, 42.6 million tons. If we accept the per capita of 450 for 1965, we would require 39.6 million tons in 1965 and 46.6 million tons in 1975. If we accept the Paley Report's 500 pound per capita for 1975, the requirements would be 52 million tons.

I feel more comfortable with the two possibilities for 1965: 36 million tons on the basis of the current 410 pounds per capita, and 39.6 million tons on the basis of the 450 pounds.

Taking the shorter range view, 1960, which is the urgent responsibility of management now; using the current 410 pounds, domestic production requirements will be 32,900,000 tons. If we use 425 pounds per capita for 1960, our requirements would be 34,300,000 tons.

On the 410 pound basis, only 3,400,000 tons would be added to 1955 production by 1960. On the basis of 425 pounds, an increase of 4,800,000 tons would be repaired by 1960.

MORE CAPACITY THAN COMMITTED MAY BE NEEDED—Current capacity of the industry is 30,500,000 tons on a six-day basis. New machines and extensions already projected and being built will bring that capacity in another 18-24 months to about 34 million tons, almost adequate to take care of 1960 requirements at the current per capita rate of 410 pounds. On the basis of 425 pounds, perhaps another 2,000,000 tons will be needed.

Since the war, capacity has been pretty well filled in every year except 1949. It has run over 90% as against the 80% it used to run in the 20's and the 60–65% it ran in the 30's. I get scared when I see these enormous projections which seem to run ahead of possible consumption. I can't forget years like 1920–21 and 1938, when the industry was built far beyond its then-requirements. However, we have a different spirit in the industry today. We certainly have a different leadership.

Everytime somebody talks with me about new machines and say, "when we get it built we have to run it," I remind them that a paper machine is built for 30 or 40 years and what it does the first year isn't so important as what it is going to do the rest of its life. We have a striking example in the steel industry. They weathered a real economic storm in 1953. After the war it was induced by the government to greatly expand capacity. About when capacity was completed in 1953, effective demand only equaled 60% of capacity. The steel industry didn't force the market to take what it didn't want and you know what happened when things finally turned around last fall.

THE PROBLEM OF GRADES—In the paper industry, the growth in different grades are not identical. The rate of growth of these broad segments as developed by the National Conference Board, are based on the long-term trend, taken as of 1950:

	Indicated Annual Rate of Growth
Construction Paper and Board	8.19%
Paperboard	4.04%
Wrapping Paper	4.24%
Sanitary Papers	5.29%
Printing Papers	2.97%
Fine Papers	3.23%
Newsprint	1.23%
Industry-Wide Average	3.47%

Except for newsprint, the Conference Board's projected rates are consistent with the figures which I gave you earlier, based on population trend and increases in consumption from 410 to 450 tons per capita in 1965.

In the case of newsprint, the 1.23% is not adequate. The peak of production in the U. S. was in 1926, a little under 1,700,000 tons. Thereafter, it declined almost continuously and in 1946 was less than half of 1926 production. The development in the South and use of hardwoods in other parts of the country have turned the situation around completely. Newsprint production this year will be 1,500,000 tons, back close to the '26 level. With the newsprint machines now being built and projected, it is expected annual U. S. production will approximate 2,000,000 tons in another year or two.

Ever since the 20's, newsprint consumption in the U. S. has continued to gain, based largely on Canadian imports. It is likely increased consumption from now on will come largely from domestic mills.

I hope I haven't befuddled you with too many figures. Today, in our industry, the short-term outlook is bright; the long-term outlook is brilliant.

To Be World's Biggest Mill

JACK LYDEN, new Mgr. of expanding Mobile Mill, to be biggest in world. He was born in West Va., father worked at famous old Cherry River mill.

Mobile, Ala., mill of International Paper Co., will become the biggest paper mill in the world late next year. IP's new investment there has been boosted to $43,000,000. Besides the new kraft machine, starting up next October, the newsprint machine, due to start in August, the additional pulp, it will have a new office building.

Jack A. Lyden, has been transferred to the expanding Mobile mill as manager, with Arthur Perkins, from Divisional Engineering, as assistant mgr. Mr. Lyden has been manager at Natchez since 1950, starting up that mill, and before that was mgr. of Georgetown and Mobile. He was born in West Virginia, worked in Glens Falls, N. Y.

At Natchez, Eugene E. Ellis moves up from production supt. to mgr.; Emmett Jones to production supt. from pulp supt., and Johnnie Griffin from asst. to pulp supt.

L. L. Lapeyrouse is new mgr. at Bastrop, La., and also will be a special asst. to Coordinator of Paper Mills Sievert. Last month, P & P reported Harry Rogers moved from Bastrop to Moss Point, Miss., as mgr.

Notice to U.S.A. Mills!

A U. S. Congressional mission headed by Rep. Don Hayworth of Michigan and Rep. John V. Beamer, of Indiana, visited New Zealand mills recently. Rep. Hayworth said that he saw no reason why New Zealand should not be able to sell newsprint in the U. S. A. and he asked how legislation might be framed to facilitate imports. He added that dollar funds from the U. S. export-import bank would be well invested in the expansion of New Zealand's pulp and paper industry.

On "Operation Enterprise"

On a recent tour of some ten nations in the Orient, from Japan and Thailand to Australia, New Zealand and South Pacific islands, was D. A. Prouty, assistant vice president of public relations, Scott Paper Co. He was one of six American businessmen on "Operation Enterprise," to spread knowledge of successful American sales and marketing methods.

PULP & PAPER

What's New in the World of Woodpulp

Noticias Mundiales de la Industria Pulpera

FLOOD PUTS ATENQUIQUE OUT OF OPERATION—A disastrous flood heavily damaged one of Mexico's biggest mills, the kraft pulp and paper mill of Ca. Industrial de Atenquique, causing it to be shut down for at least two months. In the village of Atenquique, nestled in mountains on the Tuxpan River, 135 miles south of Guadalajara, toward the Pacific Coast, the flood caused 8 deaths and destroyed 20 homes. Basements of the mill were covered with sand. But management planned to have it back in production by January. The mill started up Jan. 18, 1947 and a complete description by a visiting PULP & PAPER editor is in our May, 1948 issue. It has a 120 in. trim Black-Clawson Fourdrinier with General Electric drive and Ross air system and hood, Allis-Chalmers liquor and stock pumps, Goulds water pumps, Allis-Chalmers and Louis Allis motors, Shartle jordans with big Electric Machinery drives, Nash vacuum pumps, Cameron winder, Combustion Engineering power and recovery boilers, Goslin-Birmingham evaporators, Carthage chipper and barker, Chicago Bridge silos and digesters, Impco washers, screens and thickeners. Extent of damage to equipment was not reported. Ex-Ambassador Jose Angel Ceniceros is general manager. Charged with putting the mill back in shape is Supt. Bryant, a papermaker from the Southern U.S.A. industry.

NEW EFFLUENT BURNING PROCESS—The Borregaard Mills of Norway, largest pulp and paper enterprise in that country, will build a $3,000,000 plant at Sarpsborg to convert sulfite effluent from 500 tons daily production into 220,000 pph of steam by the new Zimmerman wet air oxidation process. The fuel will be used for mill operations, probably saving $1,000,000 a year in imported fuel oil.

Hammermill Paper Co. in the United States was the first mill to use this process by which effluent combustion takes place in the presence of water. Frederick J. Zimmerman, of Rothschild, Wis., U.S.A., is the inventor and chairman of a production group in Sterling Drug Co. which developed the process. Sterling holds all patents. Borregaard is agent in Europe for licensing the process.

The process takes place in a closed system, with open flue stack eliminated. Combustion is in a reactor instead of a conventional boiler. Effluent, dispersed in water, is fed into the reactor along with compressed air. There is said to be virtually no dissipation of heat. Hot gases and steam are piped out one end for further use. Inorganic material is continually removed with excess water at the other end.

FREDERICK J. ZIMMERMAN, inventer of new wet air oxidation process.

SR. FREDERIC J. ZIMMERMAN es el inventor del nuevo proceso.

SCANDINAVIAN PRICES GO UP IN U.S.A.—Scandinavian pulp prices increased for the fourth quarter to U.S.A. mills. Finnish and Swedish prices went up $5. Their

DESASTRE EN ATENQUIQUE—Una inundacion ha causado tan graves danos a la fabrica de la Cia. Industrial de Atenquique, Mexico, que se han suspendido operaciones en la fabrica por a lo menos dos meses. La fabrica es una de las mayores de Mexico, productora de pulpa y papel kraft.

Los sotanos de la fabrica estan cubiertos de arena, y en la villa de Atenquique, situada a 216 km. al sur de la capital de Mexico, se perdieron ocho almas y 20 domicilios. Sin embargo, la gerencia calcula que en enero de 1956 se restablecera la planta en plena produccion.

La fabrica inicio produccion en enero de 1947, y aparecio en nuestro numero de mayo 1948 una cronica completa escrita por uno de nuestros redactores. La fabrica posee una fourdrinier marca Black Clawson de 120 pulgadas con impulsion General Electric y sistema de aire Ross, bombas Allis Chalmers para materias primas y Goulds para agua, motores Allis-Chalmers y Louis Allis, jordans marca Shartle con impulsion Electric Machinery, bombas de vacio Nash, devanadora Cameron, calderas Combustion Engineering, evaporadoras Goslin-Birmingham, astilladoras Carthage, digestores Chicago Bridge, y lavadores y alambres Impco.

El Sr. Jose Angel Ceniceros, ex-embajador, es gerente de la planta. El director Bryant, que llego a Mexico la region sur de los EUA, esta encargado de restablecer la planta.

NUEVO PROCESO—La fábrica noruega Borregaard, mayor empresa de pulpa y papel de aquel país, construirá en Sarpsborg una planta a costo de 3.000.000 dls. para convertir el líquido efluente de la elaboración de sulfito en vapor para fuerza. Se calcula que de 500 toneladas diarias de sulfito resultarán 220,000 libras por hora de vapor, economizándose así probablemente 1.000.000 dls. anuales de petróleo importado.

La fábrica Hammermill en los EUA fué la primera que usó el mencionado proceso por medio del cual se efectúa la combustión del líquido efluente habiendo agua presente. El Sr. Frederic J. Zimmerman de Rothschild, Wisconsin, EUA, fué el inventor y es actual director del grupo especial de la Sterling Drug Co. que se encargó del desarrollo del proceso. La Sterling posee todos los patentes del caso, y la Borregaard tiene la representación por Europa otorgando las debidas licencias.

El proceso se realiza en encerrado, sin chimenea. La combustión se efectúa en un reactor al que se entrega el efluente con agua y aire comprimido, de modo que, según se dice, no hay ninguna pérdida de calor. El vapor y gases calientes se sacan por un extremo del reactor, y los productos inorgánicos, junto con agua sobrante, por el otro.

PRECIOS ARRIBA—Para los ultimos tres meses de 1955, los precios de pulpa de Finlandia y Suecia a los fabricantes norteamericanos ascenderán 5 dls. por tonelada. El sulfito blanqueado subió hasta 150 dls. tonelada, ascendiendo también los otros grados. Sulfito blanqueado de Noruega aumentó 2,50 dls. hasta 145 dls. en el muelle. Las fábricas norteamericanas mantuvieron el precio de 145 dls. encargado, pero el sulfito blanqueado de abeto del Canadá oriental aumentó 5 dls. a 150 dls., ascendiendo también todo sulfito canadiense sin blanquear 5 dls. tonelada como el de Finlandia y Suecia. Se verá cómo actuarán las fáb-

bleached sulfite went to $150 a ton. Other grades similarly increased in price. Norwegian bleached sulfite was increased $2.50, to $145 dock price. U.S. mills held their price for bleached sulfite steady at $145 delivered but eastern Canadian spruce bleached sulfite was raised $5 to $150 and all Canadian unbleached sulfite went up $5 as did Finnish and Swedish. What U.S.A. mills do in the first quarter, 1956, remains to be seen, as they are again behind the others.

NEW JAPANESE MILL PRODUCING—Another new Japanese kraft pulp and paper mill has begun production. The Toyo Pulp Co. in Tokyo has completed conversion of a former Japanese Navy aircraft assembly plant in Kure to pulp and paper making. Its annual production will be 35,000 tons of kraft pulp, and 13,000 tons of kraft paper, about 12% of such production.

The Alaska Pulp Co. of Tokyo, through a subsidiary organized with American members in Alaska, continues to make plans for buying a large block of Alaska government-owned timber from the U.S. Forest Service at an auction sale now tentatively set for about Nov. 1. This would be the first deal of its kind whereby American government-owned timber would be used to make pulp for another country. Two likely sites for the mill have been selected near Sitka, Alaska.

STUDY MADE FOR MILL IN HONDURAS—The non-profit, private industry-supported International House of New Orleans, Louisiana, U.S.A. (Gravier and Camp Streets), now a clearing house for new industrial projects in Latin America, announces that a detailed study has been made for establishing a new pulp and paper mill near Lake Yojoa in Honduras, in a forest area connected by highways with Puerto Cortes on the Atlantic and Pacific ports and El Salvador. Investors or others interested can obtain details by writing International House regarding "Project No. 15, Honduras."

FOXBORO LINE IN ASIA—Foxboro Co., Foxboro, Mass., U.S.A., a leading maker of instruments for pulp, paper and other industries, has named Yokogawa Electric Works, Ltd., Tokyo, Japan, as its licensed manufacturer and sales agent for the full Foxboro line in Asiatic countries. This was announced by B. H. Bristol, president of Foxboro. It also has associated firms in London and Montreal.

BACK FROM EUROPE—Rex Vincent, vice president and technical consultant of Bulkley, Dunton Pulp Co., has returned from a month's "visit to the trade" in England, Scotland and Wales, as well as to Bulkley, Dunton's London offices.

SORRY—we erred in connecting the new Mexico City company, Empaques de Carton United, which took over United Shoe & Leather Co.'s board mill there, with brewery interests in Monterrey. While there were reports that it connected in some way with a major brewery, it is definitely not the one in Monterrey.

Worldwide commerce in woodpulp and paper is setting new patterns as well as new records. As a service to many subscribers to PULP & PAPER in other countries, we are now publishing this news in both Spanish and English.

If you live in one of the sterling monetary countries or anywhere in Europe, you can subscribe to PULP & PAPER by writing to HAROLD P. DE LOOZE, Ltd., 8 Peter St., Manchester, England. You can pay for your subscription in sterling currency. A one year subscription, which includes the WORLD REVIEW NUMBER, statistics, etc., costs $5 or sterling, £ 1.15.9. For two years, it is $8 or sterling, £ 2.17.2.

ricas norteamericanas al principio de 1956, pues al momento quedan atrás de las otras.

NUEVA FABRICA EN EL JAPON—En Kure, Japón, se ha iniciado la producción de pulpa y papel en la fábrica de la Toyo Pulp Co., antigua fábrica de aviones convertida en productora de pulpa y papel. Producción anual se calcula en 35.000 toneladas de pulpa kraft y 13.000 de papel kraft.

Otra empresa japonesa, la Alaska Pulp Co., piensa comprar un gran terreno forestal, ahora propiedad del gobierno federal norteamericano, en Alaska, tramitándose la compra por medio de una empresa dependiente. El terreno se ofrecerá en remate público cerca del 1º de Noviembre. Si se realiza dicha venta, será la primera vez que se ha utilizado madera propiedad del pueblo norteamericano para producir pulpa destinada a un país estranjero. Se han escogido dos locales para la fábrica, cerca de Sitka, Alaska.

ESTUDIOS PARA FABRICA EN HONDURAS—La International House (Casa Internacional) participa que se ha elaborado un estudio mirando hacia establecer una fábrica de pulpa y papel cerca del Lago Yojoa, Honduras. El local goza de vías de comunicación con Puerto Cortés en la costa del Atlántico, y con puertos sobre el Pacífico y por tierra con El Salvador.

La Casa Internacional sirve como medio de intercambio y fomento para realizar inversiones en nuevas industrias en América latina. Al lector interesado se le ruega comunique con International House, Gravier and Camp Streets, New Orleans, USA.

LA FOXBORO EN ASIA—La Foxboro Co., Massachusetts, EUA, fabricante de instrumentos, ha nombrado como fabricante con licencia y agente de ventas en los países asiáticos la Yokogawa Electric Works Ltd., Tokío, según declaración del Sr. B. H. Bristol, presidente de Foxboro. La empresa tambien tiene representantes en Londres y Montreal.

DE REGRESO—Sr. Rex Vincent, presidente y consultor técnico de la Bulkley, Dunton Pulp Co., ha regresado a los EU de un viaje de visitas comerciales en Inglaterra, Escocia y Gales, y también a las oficinas de su empresa en Londres.

REPRESENTANTE EN EL ECUADOR—L. Henriquez y Cia., de Guayaquil, ha sido nombrado representante para el Ecuador de la DeLaval Steam Turbine Co., Trenton, New Jersey, EUA. La compañía se encargará de ventas de bombas, turbinas y generadores.

SENTIMOS MUCHO habernos equivocado al declarar que la compañia Empaques de Cartón United, de Mexico, es dependencia de una empresa cervecera de Monterrey, Nuevo Leon, Mexico. Se ha dicho que la United tiene ligas con una famosa cervecería, pero en todo caso no es la de Monterrey.

Hoy día en el comercio mundial de pulpa y papel se están realizando grandes cambios. Con el anhelo de mejor servir a nuestros muchos lectores, mensualmente publicamos nuestras noticias mundiales en espanol e inglés.

Si el lector vive en país de moneda esterlina o en Europa, puede suscriptor a PULP & PAPER comunicándose con Sr. Harold P. DeLooze, Ltd., 8 Peter St., Manchester, Inglaterra, enviando el abono en moneda esterlina. El precio de la suscripción anual, inclusive el número WORLD REVIEW (Revista Mundial), es a 5 dls. o sean L1/15/9 en moneda inglesa; por dos años, 8 dls. o L2/17/2.

Looking Over New Mill Site

Looking over a great hole being dug for St. Regis' new Beloit machine, due to start making 1,000 to 1,200 tons a day in Apr. 1957, are (l. to r.): LEON GIBSON, Paper Mill Tour Foreman at Jacksonville; FLOYD O. McCLOUD, recently appointed new Paper Mill Supt.; STERLING O. WARNER of Chromium Corp. of America; and CARROLL ("CUZ") WARNER, no relation, Machine Room Supervisor at Rayonier's Jesup, Ga. mill.

Mr. Gibson had been Asst. Supt. at Pensacola and worked at Pensacola for 7 years before moving to Jacksonville, succeeding JOHN VICTOR, who moved up to Gen. Supt. CARROLL WARNER has worked in South 36 years as a papermaker, starting at Bogalusa. He was with I.P. and St. Joe before joining Rayonier. The Warners were visitors at Jax.

New Activities at Jacksonville Mill

• One of the highlights of the Southern-Southeastern Supts. Convention in Savannah, Ga., in October was the announcement of the new automatic dryer drainage control system devised for St. Regis Paper Co. at Jacksonville, Fla., by Raiford "Red" Clements, power supt. at that mill.

So, after the meeting, a PULP & PAPER editor called at the mill to get a photograph of a new "key" controlling installation involved in the arrangement.

The novel idea involved in Mr. Clements' control system is that any change in the theoretical head in the primary headbox of the 228-in. Jacksonville Fourdrinier machine motivates a mechanism which controls differentials in each section of the dryer.

The accompanying photograph shows the Foxboro recorder which is now located on the wall at the forward backside of the long machine, just alongside the Fourdrinier section. This recorder is hooked up to the machine's pressurized headbox and in turn it controls a series of 8 Foxboro differential drainage controls for the three dryer sections.

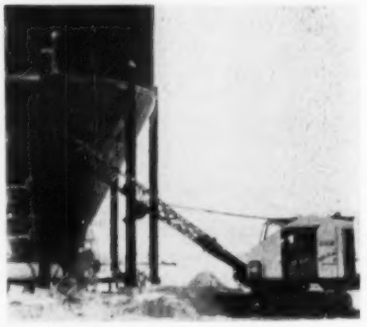
STEPHEN P. KAPTAIN, former Director of Wood Research and Dev. for St. Regis Southland Woodlands, has taken over as Res. Mgr., of the St. Regis mill at Jacksonville, succeeding John McDermott, promoted to Mgr. of all Paper Mills.

This machine has a wide speed range—750 to 2,200 fpm—but in 18 months since Mr. Clements' system was installed, only minor adjustments and recalibration checks have been made.

The Beloit machine ran 2,200 fpm for 24 hrs. on 50-lb. multiwall bag a few months ago. On Oct. 4 last it ran 1,025 fpm on 42-lb. board, making 522½ tons in 24 hours.

The new No. 2 machine being built for Jacksonville, Fla. by Beloit is expected to easily make over 1,000 tons a day, possibly up to 1,200 or 1,300 tons.

Justin McCarthy, vice pres. and chief engineer, St. Regis, is in charge of the expansion, to be completed by Apr. 1957.



More Chip Storage is Needed

For St. Regis's expansion at Jacksonville, a pulp and paper mill that will add 1,000 or more tons a day to production there, new chip silos are needed. This Bucyrus-Erie clambucket-dragline crane, operated by Geo. D. Auchter Co., of Jacksonville, is digging out for foundations for 3 new silos alongside the present 3 silos.

Expands at Savannah

Hercules Powder Co. announces plans for expansion of its rosin and rosin size plant at Savannah, Ga., including a unit for processing of crude tall oil, to be operated by Hercules' Paper Makers Chemical Dept.

Hercules' first tall oil plant, at Franklin, Va., will be ready to manufacture resins, purified fatty acids, and related products early next year.

Key Unit in New Drainage Control

LEON GIBSON, Paper Mill Tour Foreman, points to Foxboro recorder on wall alongside Fourdrinier section of Beloit machine at St. Regis Jacksonville Mill which is a "key" unit in new dryer drainage control system patented in name of Power Supt., Red Clements. It was discussed for first time at Savanah meeting of South-Southeast Supts. Any change in theoretical head in primary headbox actuates this recorder, which in turn controls a series of Foxboro differential drainage controls.

Manual switch seen at lower left has been used only while making minor adjustments. It [illegible] manual control at lower right. Below these—a print[illegible] caution urges workers to put paper wrapping and [illegible] into trash cans.

His Views on Management Won a Prize

For a prize essay on mill communications values, ELROY STEINMETZ, Mill Schedule Planner, Kimberly-Clark Corp., Neenah, Wis., won $100. JOSEPH M. STEINER, Appleton, Wis. (seated, left), Midwest Rep. for John W. Bolton & Sons and its Emerson Mfg. Div., is handing the check to Mr. Steinmetz (seated on right).
Looking on admiringly (left to right): FRANK WILTON, Training Coordinator at Neenah; TED PERRY, Manager of the Neenah K-C Mill, and BUD WEBB, Personnel Supt. at Neenah.

Say, Management Men—

Employes Are Always Forming Opinions About You

—Even if They Can't Talk to You

• When good communications exist in a company, the employe can actually talk to the chairman of the board through his foreman, Elroy Steinmetz, Kimberly-Clark, Neenah, Wis., mill schedule planner, commented in his Bolton award winning essay on "The Value of Better Mill Communications."

"If the foreman doesn't have the right to communicate with top management and express his opinions and opinions of people on the floor, there is no communication," contended Mr. Steinmetz.

In the John W. Bolton & Sons national contest, he was first prize winner for the Northwestern Supts. Division (Mich., Wis., Minn.)

"There is no better way of developing team spirit than through an active, comprehensive program of communications. There is no one model plan, each program must be developed to fit the needs of the company, but it must be a 2-way street—management willing to listen to what employes really think, what they want to know, how they feel about things, and then telling employes the facts about company policies, operations, economics and those things which affect them.

EMPLOYES DAILY THINK ABOUT MANAGEMENT—"Every day employes are forming opinions about top management, about the company, about major national issues under debate. Whether they base their views on hearsay, biased propaganda or the grapevine or on facts depends on management.

"Employes want to know about their company background, organization, general operations, the products and how they are made and where they go. They want to know about company policies and new policies and how these affect them; about company plans and what they mean; company income, profit and losses, future plans; and they want to know about the security of the company.

"Employes need to know about economic facts of the company and their own life, what competition is and how it functions, facts about profit, causes of inflation, the right and wrong of private enterprise freedom, government plans and socialism; their own responsibility to fulfill civic responsibilities.

"And the communications must be developed so that any one and everyone feels free to say 'I don't know what you mean.' Clarity is necessary. The degree of education is not the same from top to bottom and it is one big obstacle in this matter of communication."

GLEN T. (TINY) RENEGAR is General Chairman for Supts. National at Lake Placid.

Various Chairmen Picked For Supts. National

Glen T. (Tiny) Renegar, mill manager, Container Corp. of America, Manayunk, Pa., is general chairman for the Superintendents' National next June 12-15 at Lake Placid, N. Y. President Howard Street says the meeting will be "of and for management."

On the program committee are John Rich and George M. Suydam, both of Riegel Paper, Riegelsville, N. J.

Clarence F. Kingston, Hammermill's paper mill supt., heads entertainment. Norm O. Weil, W. S. Tyler Co., may try to stage a big league baseball game, but he's going to be busy again planning the Get-Together party with his associate, D. L. Vigneron.

Cletus Coffman, Chesapeake Paper Board, and J. E. Carruthers, Interlake Tissue Mills in Ontario, are the reception committee. A. M. Hartley, Nopco, is in charge of the ladies' program; Lon Sutherland, Sutherland Refiner president, of golf; R. S. Greene, Waterbury & Sons, of transportation; Walt Morehouse, Nopco, finances, and Joe Paciello, DuPont, and Harry Weston, APPMSA secretary, publicity.

Low instead of High on the Editor's Totem Pole

As a result of a typographical error, in the November issue of PULP & PAPER reference was made to the "high" viscosity of J. M. Huber Corp. clays. Anyone familiar with clays and coatings would know it should have been "low viscosity." Even though we trust not much confusion resulted from this obvious mis-statement, we are very sorry it happened and express our regret herewith.

DR. KUHN EXPANDS ON SPEECH BEFORE NATIONAL SUPTS.

Answers Critics of Unemployment Pay

Warns management: "Don't take an all-or-none position." Says "problem isn't yes or no—but when, where, how."

BY DR. ALFRED KUHN

Asst. Professor of Economics
University of Cincinnati

● Please accept my belated thanks for the August, September, and October copies of PULP & PAPER covering my talk and subsequent discussions of the so-called GAW. Aside from getting my background a bit confused (I have been with the University of Cincinnati continuously since 1949) I thought you did a good job, within your space limitations, of highlighting those points of my talk which would interest your readers.

I have enjoyed reading the ensuing comments and discussion, particularly those of Mr. Heron and an unnamed writer in the September issue, and of Mr. Riter and Dr. Wilson in October. I must say however, that with each new article my own original ideas become less and less recognizable, and at this point I yield to an urge to comment.

To begin with, the first paragraph of Mr. Riter's comments in the October issue, including the editor's note, constitute a serious distortion of my position. Mr. Riter and the editor together have seemed to make me say that ". . . The ultimate extension [of the Ford plan] to the full guaranteed annual wage is nothing more than another way of paying a wage boost or an added fringe benefit. . . ."

May I state for the record that I never said, implied or believed any such nonsense. I am firmly opposed to the full guaranteed annual wage in any except a handful of places which are already so stable as to make a guarantee pointless. And I did not say that the Ford plan is "nothing more than" a wage boost or fringe benefit. It is obviously something new with many ramifications. I said only that its cost to the company is the same as a wage boost of the same size.

A "DIFFERENCE IN EMPHASIS"—Several persons have noted in your magazine the importance of the things I did not say in my talk, and rightly so. May I merely observe that in a 20 minute talk on so complex a subject, without benefit of questions or discussion, many things necessarily remain unsaid. In choosing what to include I decided to emphasize those things which would perhaps be new to the thinking of your group, feeling confident that the NAM and other industry spokesmen would call other points to their attention.

Subsequent articles have fully justified my confidence. The resulting difference in emphasis is somewhat unfortunate, however, because in some respects it makes us seem farther apart than we actually are.

For example, my concluding point was that in any venture in this direction management must stick adamantly to (1) flexible financing (so many cents per hour actually worked) and (2) clearly limited liability.

Freely translated, if you give anything, insist on SUP, but never grant GAW—unless you are an unusually hardy soul in a stable industry, and even then include a cancellation clause such as that in Procter & Gamble Co. (Eds. note—at Cincinnati he said P&G has had a "GAW" for years). I feel sure the NAM would agree that if a plan is adopted it should embody those important characteristics.

DON'T TAKE "ALL-OR-NONE" STAND—I also cautioned against do-or-die attitude, and would like now to urge equally against an all-or-none position. Mr. Heron and Mr. Riter both show the frequent management tendency to shift their discussions from a limited, flexible fund to a full, absolute, perhaps universal guarantee.

Mr. Heron, for example, says that "our economy is not ready to say that a bankrupt buggywhip company must continue to pay its former employees their full wages for a year after it goes broke." Of course not. SUP is

Explanations— What Dr. Kuhn Refers To

Here's enlightenment on who and what Dr. Kuhn refers to in this article:

GAW—Guaranteed Annual Wage.

SUP—Supplementary Unemployment Plan. (Such as Ford Supplementary Unemployment Benefit Plan.)

MR. RITER—Henry G. Riter 3rd, Pres. of National Assn. of Mfrs.

MR. WILSON—Dr. Robert E. Wilson, Chairman of Standard Oil of Indiana.

MR. HERON—Alexander R. Heron, Vice Pres. of Crown Zellerbach Corp.

"ANONYMOUS WRITER"—One of the foremost leaders of the pulp and paper industry, whose name could not be revealed for ethical reasons involving his future relations with other leaders.

ABOUT DR. KUHN—Dr. Kuhn, born in Reading, Pa., earned a ph.d. at Wharton Business School and taught there. He worked in a steel firm's shops as set-up man. He has been continuously at the U. of Cincinnati since 1949 (in his article he notes that P&P got the erroneous impression, in a previous interview, in saying he had left U. of C. to write a book).

DR. ALFRED KUHN – says his ideas and those of industry leaders who took issue with them, are really not so far apart.

WHAT'S BEEN SAID—Dr. Kuhn's original talk on GAW before the American Pulp & Paper Supts. Convention in Cincinnati is reported in Aug. PULP & PAPER, pages 43-45.

Mr. Heron calls GAW "completely negative" and "a strangling cost burden—Sept., P&P, page 65-66. Also in Sept.—The "anonymous writer" takes issue—page 66. Stanley Rector, of Unemployment Benefit Advisors, cites what he calls defects in Ford and GM plans—pages 67-68.

In Oct. issue, P&P, pages 93-96—Mr. Riter, Dr. Wilson, as well as Dean Clarence Manion of Notre Dame, and other pulp and paper leaders contest these plans will withhold labor from the market, prevent creation of jobs, benefit a favored few, etc.

not for buggywhip companies, bankrupt or not, but neither are pensions, sick leave, six holidays with pay, or even hourly rates equal to those in paper.

Is Mr. Heron's implication that the rest of the economy be limited to what the buggywhip industry can afford? In any event, his statement clearly shows that the enemy in his mind is universal, perhaps compulsory GAW—otherwise he would not even think of buggywhips.

If that is what he is fighting, I wholeheartedly join him in the fray. I also agree thoroughly with Peter Drucker, as quoted by Mr. Wilson, for Drucker is speaking of an "absolute guarantee."

THE IDEA IS "NOT ALL BAD"—But isn't this just a foot in the door? If management gives SUP, won't unions come back for more—and more—and more? Certainly! Mr. Riter quite properly expresses fear of a time "if and when the union gets the full 100% full-time guaranteed annual wage."

My only answer is that American management has accomplished great things because it has shown a hard-headed tendency to deal with situations on their merits. SUP must similarly be accepted or rejected on its merits, and so must any proposed extension of it.

If it is sound and feasible in a particular time and place, management puts itself in an untenable position if it rejects a reasonable proposal on the grounds that an unreasonable one may be made sometime in the future. If the general implication is that unions can get anything they want out of management, reasonable or not, why are they not now getting $50 an hour?

The fact that plans more comprehensive than those now being adopted have been in successful use for many years to the benefit of both company and workers means to me that the idea is not all bad. I repeat, the problem is not yes or no, but when, where, how, and how much.

SHOULD BARGAIN IN TERMS OF TOTAL LABOR COSTS—The anonymous letter in September said that I overlooked that this and other fringes might price a product out of the market. True, in the limited time at my disposal I did not discuss it, but I assumed that you of management will keep constant vigil on this score, and that you will at all times bargain in terms of total package labor costs, including fringes. If your negotiators are so stupid or inept as to bargain on the wage alone, and then let the union slip a "fringe on top" of it, my

NAM's Riter, in Rebuttal, Says GAW Creates Two Workers' Classes

• I welcome the continuing efforts of PULP & PAPER to clarify the GAW and SUP issue and am glad you have given me an opportunity to comment on Dr. Kuhn's further remarks and to answer the questions which he addresses specifically to NAM.

In blithely assuming that once having agreed to SUP, management can hold it to the limits originally agreed upon in future bargaining sessions, Dr. Kuhn is indulging in the very "ostrichism" he charges to NAM. Walter Reuther has warned he intends to get the full GAW as originally demanded and, in contracts signed subsequent to the Ford and GM agreements with other companies, he already has made big strides toward making good on his boast. When 1958 comes around, he aims to present the automotive producers with a fait accompli—with full GAW contracts with other companies which they will be required to match or else undergo devastating strikes.

In questioning Mr. Heron's symbolic comment about what a "bankrupt buggy whip" company can afford, Dr. Kuhn seems to imply that we should have two classes of workers in our economy—the elite who are employed in expanding industries which can tack on to their prices almost anything the unions demand, and "second class" people who are unfortunate enough to be engaged in static or declining industries.

Let me repeat what NAM has often said. We do not object to an arrangement between management and its employes which aims at providing a greater cushion against layoff, provided such an arrangement is in conformity with the principles of free, competitive enterprise. We do object to plans which induce idleness by making it almost as profitable not to work as to work; to plans which are integrated with the state unemployment compensation systems and which, therefore, can affect the interests of all employers in the state; to plans which discourage economic initiative; and to plans which can be used by union leadership to regiment and discipline their rank-and-file membership.

ANSWERS DR. KUHN—Now as to the specific questions Dr. Kuhn addresses to me and the NAM.

Q.: Do you oppose a worker saving money while employed so he will have some when unemployed?

HENRY G. RITER
3rd—"NAM objects to plans which induce ... profitable idleness."

A.: Obviously, no answer is required. Industry always has favored saving and puts much effort behind government bond drives as well as other savings programs.

Q.: Do you oppose the employer making the collection and keeping the fund for him, particularly when to do so makes it unavailable in case of strike?

A.: Employers should do all they can to lead employes to save and if an organized program whereby the money is saved by the employer is of help, it should be instituted.

Q.: If after a layoff the unemployed worker chooses to live for 2 or 3 months on his own accumulated savings before taking another job, should he be free to do so?

A.: He should be free to refrain from taking another job as long as he likes, providing that by doing so he does not affect the interests of other people. No one is compelled to work in this country if he does not choose to do so, and as long as the vacation from employment is at the worker's own expense, no one can object.

Q.: A question related to No. 3, do you have any objection to the American people taking part of their rising standard of living in the form of increased leisure rather than increased goods? If not, is there any reason why some of this leisure should not be taken between jobs, rather than stored up till age 65 or taken during formal vacations?

A.: The increased standard of living brought about by improved technology and increased productivity belongs to all of the people. The chief way in which it can be made available to all the people is by reducing the price of the goods and services they need, so that all have a chance to share. When employes in production, through the monopoly power of union organizations, insist on demanding the lion's share of gains in efficiency and

even discount such gains in advance through unwarranted wage increases, greater leisure, or such devices as the GAW or SUP, they are in effect appropriating to themselves what rightfully belongs to others. Where a labor monopoly exists, management is powerless to prevent this without submitting to long and costly strikes.

At this point, I might say that NAM has studied the Glassworkers Security Benefit Plan. It seems to us to fit within the framework of free enterprise principles. At the same cost as the Ford Plan, it provides protection for laid-off employes without undermining their incentive to work steadily, without interfering with the state unemployment compensation systems, without discouraging economic initiative, and without enhancing the monopoly power of the unions or their ability to dictate to their members. We are recommending to our members that where the need for additional layoff protection exists it should be provided through some form of individual account plan.

ANSWERS OTHER QUESTIONS—As to the additional four questions propounded by Dr. Kuhn, I would like to answer these in the form of a general statement. While it is possible to protect workers against some of the impact of job loss by an unemployment insurance system, we cannot guarantee anywhere near full-time wages without destroying the insurance principle. All insurance is based on the principle that the last thing the policy holder wishes to do is collect. Obviously, if a man is insured against unemployment to the extent he suffers little or no loss of income, the more often he is laid off and the longer the layoff lasts the better off he is. He would be rather foolish to be in a hurry to get a new job if he can have the same, or nearly the same income by not working.

Our present state unemployment compensation systems provide the insurance which, in the opinion of the various state legislatures, is adequate for the purpose in their localities. NAM recommends continual study of these systems by the legislatures and improvements in the level of benefits and their duration where needed.

Over and above the benefits provided by the state systems, we do not believe additional layoff protection can be discussed in terms of insurance. We believe it is a matter for individual thrift, either singly on the part of employes or through some arrangement sponsored by the company which preserves and encourages the idea of individual savings.

KUHN Continued

respect for the quality of American management will have to drop considerably.

I agree completely with Mr. Heron and others that the costs of SUP cannot come out of profits. They come out of wages. It is also true that they come from consumers, most of whom are workers. But this statement is irrelevant to the question.

The total package cost of wages comes from consumers, whether any part of that package goes for SUP or not. It is the total package on which you must keep your eye. And if you say this is a device to force wages upward, I agree, at least in part. Unions attempt to whipsaw wages between different issues as well as between companies. Again I say, bargain in terms of total wage costs. Within a given total you can then argue SUP on its own merits.

UNIONS WANT IMPRESSION THAT MANAGEMENT PAYS ALL—But, the writer of the letter in the September issue asks, "If Dr. Kuhn's thesis is correct that the supplemental unemployment payments . . . are merely payments by labor out of what they would otherwise receive in wages, why did the unions refuse to have their members vote the necessary assessment to set up their own fund . . .?" I am puzzled to know whether this question is serious. Obviously, union leaders want their members to think that this is a clear gain which the union got for them, paid entirely by management at no cost to the workers.

It is the same human motive which prompts many Reports to Stockholders to attribute all profits to the excellence of management, even in years when demand was so strong that even half-hearted management could make money. As a result of the same motive the unions widely continue to refer to this plan as GAW rather than SUP, because of the appeal to workers of the inaccurate word "guarantee."

I would be the last to want any company to go into any such program without knowing what it is doing, and I suspect that some plans negotiated this year will run into difficulties because they were settled in undue haste.

The kind of plan, the amount and duration of benefits, the amount of contribution, and most especially the tests of eligibility, both in terms of conflict with seniority and the amount of control over refusing "other suitable employment," must all be given the most serious attention, for they can make or wreck a program, and failure will reflect badly on management even if it involves no direct money costs.

Management must also know its own unemployment experience, it must consider the kind of competition it faces, whether the demand for its product is elastic or not, and its prospects for stabilizing operations.

"ENGAGED IN OSTRICHISM"—On a multitude of thorny and important questions of this kind management needs expert advice. And it is only after consideration of these questions that a particular company or industry can intelligently decide whether SUP in any form or degree is suitable for it or not.

Remember, the Ford Co. spent three years working out its counterproposal, which the UAW adopted instead of its own demand.

It is in connection with this kind of thing that I said off the record in June that the NAM has failed miserably to give management the kind of service and constructive advice it needs, but has instead engaged in a campaign of ostrichism and fright tactics.

LIKE PENSIONS FOR MANAGEMENT—To help clarify the issue, let's examine the phrase "payment for not working," which gets bandied about so greatly. As to the general sentiment behind it, I am sure I oppose the receipt of income by non-producers (except bona fide dependents) just as strongly as does the NAM. But as the phrase is used in connection with the SUP argument I must label it a cliché which arouses a definite emotional response but contributes nothing to an understanding of the problem.

For example, some school boards have decided to pay their teachers their 9-month salary in 12 equal installments. Almost invariably these boards can expect some irate taxpay-

Continued on page 132

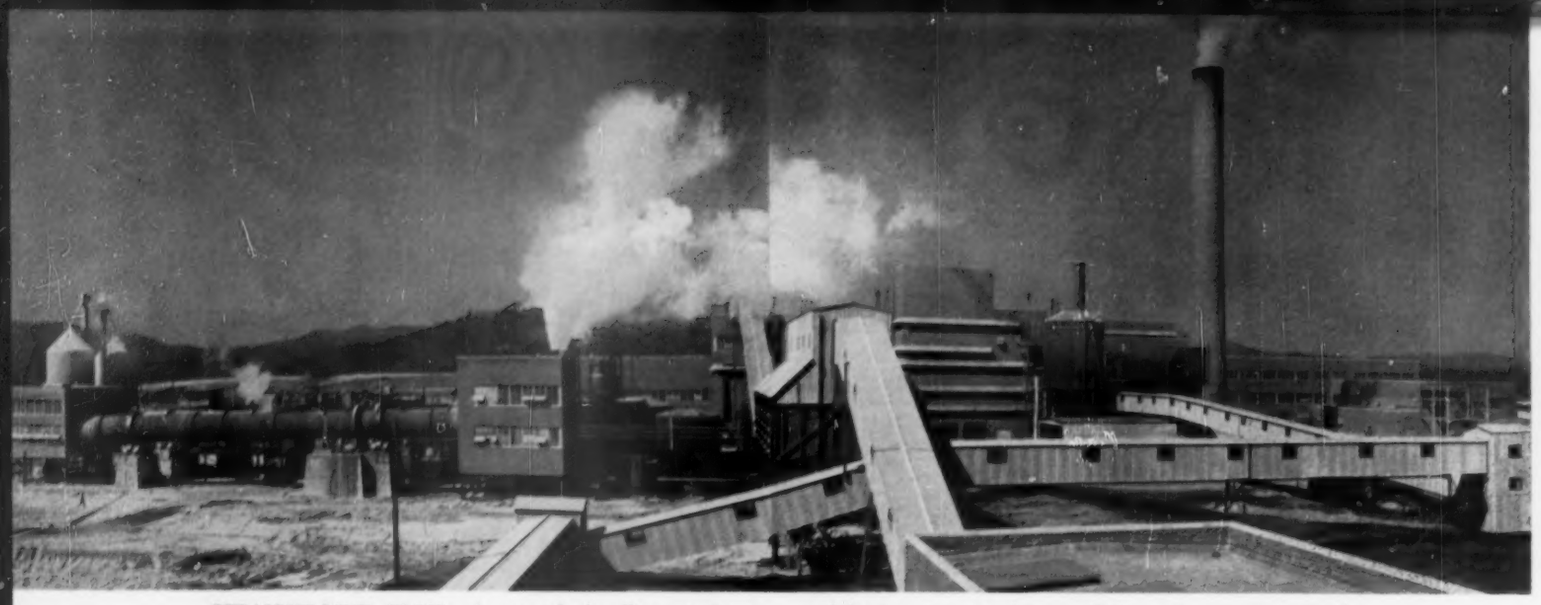
Says Kuhn Missed Point

Referring to Dr. Kuhn's comments on the article on GAW by Alexander R. Heron, vice pres., Crown Zellerbach, Corp. in Sept. 1955 PULP & PAPER, Mr. Heron had this to say:

"By taking statements out of context, he has completely missed the intention of my article."

Declines to Comment

Dr. Robert E. Wilson, chairman of Standard Oil of Indiana, wrote to PULP & PAPER thanking this magazine for its "courtesy" in showing him the further comments of Dr. Kuhn. "But I do not care to add anything to what I previously said," wrote Dr. Wilson.



STRAIGHT-LINE FLOW of materials handling at Rome Kraft. Conveyor at left carries bark picked up from underneath 3 Fibre Making Processes drum barkers, flows 303 ft., makes a right turn under chip conveyor for 238 ft. and makes a left where it is joined by paralleling coal conveyor to shuttle conveyor in steam plant. Chips move on 48 in. wide Goodyear rubber belt to top of chip storage where a traveling tripper distributes chips. Conveyor systems by Jervis B. Webb Co.

How New Rome Kraft Mill is Run

This is first complete story to fully explain how mill utilizes automation and straight-line flow

• More than "just another kraft mill" has been created at Rome Kraft Co. by the combination of proven equipment, modern materials handling, automatic controls, straight-line flow and top-notch personnel.

Late improvements in kraft pulping are embodied in this $25,000,000 mill on the Coosa River near Rome, Ga. Mead Corp. and Inland Container Corp. have again joined corporate hands to re-create the successful pattern of the Macon Kraft mill at Macon, Ga.

Herbert A. Kidd, vice president and general manager, modestly disclaims any unusual innovations in his new mill but here is the first detailed story of the complete operation utilizing many established new processing improvements.

From woodyard to finishing room, Rome Kraft was designed by company engineers from the parent company, Georgia Kraft Co., formerly Macon Kraft Co. From a highly successful start-up, this mill, originally designed for 650 tons daily, is already averaging above its rated capacity for kraft linerboard.

WILL IT BE FIRST TO MAKE 1,000 TONS?—The speed at which this mill's 252-in. Beloit paper machine is producing board led one industry vice president to remark to PULP & PAPER that it may be the first to break through the 1,000 tons-a-day barrier.

Probably the most striking feature at Rome Kraft is its straight-line flow. One process begins where the other ends, by an ingenious use of split-level floors and mezzanines. There's no wasted motion and no heavy capital expenditures for stock storage, says Mr. Kidd, and it all makes for keener operations. It's a calculated risk, of course, and one that management has well in mind but obviously doesn't feel at all hesitant about.

This concept of straight-line flow is probably best exemplified by its approach to the realm of automation. More than 5,000 ft. of integrated conveyors swiftly perform materials handling functions, including pulpwood, chips, bark, coal and finished rolls of paper.

CAPT. HERBERT A. KIDD (left), Vice Pres. and Gen. Mgr. of both Georgia Kraft and Macon Kraft Co., and a Vice Pres. of Mead Corp., Wheelwright Div. It was Canadian industry's loss, Georgia's gain, when he moved South. **JAMES A. WHELAN** (right), Gen. Supt. of new Rome Kraft Co. Mill. He had been Pulp Mill Supt. there until recently, and was former Pulp Mill Supt. at Macon, Ga. Assts. to the Gen. Supt. at Rome are EMORY CLARK and WM. E. ROSS.

CONTAINER PLANT BEING BUILT—The Rome Kraft mill stands on a 280-acre site with plant buildings tenanting 160 acres. Floor areas inside the buildings occupy some 7 acres. Construction is now underway on a container plant for Inland Container Corp., adjacent to the mill.

Some 8,000 carloads of quality containerboard on an annual basis will be shipped from Rome Kraft to almost every part of the U. S., including Inland's 10 container plants. Converted into containers and corrugated boxes, these products from Rome, Ga., will package textiles, soap, blood, glass, tobacco, floral and food products (from canned goods to frozen foods).

The start-up of the new Rome Kraft mill brings a new industry and new wealth to a predominantly agricultural and textile region. Incidentally, personnel at Rome describe it as being close to some of the best fishing areas in the South.

Automatic control at Rome Kraft begins with cooking of the chips, says Murphy J. Brown, pulp mill supt. Each process is completely automatic. All digester controls are centralized at the top of the digester in a glass-enclosed room. Foxboro Co. supplied most of the instrumentation, which is the flush type mounted on enclosed cabinet-type panels along with neces-

sary push buttons, ammeters, rheostats and other operating devices. The importance of instrumentation at Rome is judged by creation of a special post. Kenneth Riddle, a graduate of Auburn in electrical engineering, heads up the instrument work.

(For a complete story on pulpwood operations up to and including chip discharge into the digesters, see Pulpwood Section in this issue.)

EXHAUST HOODS FOR DIGESTERS—Each of the 8 Chicago Bridge & Iron carbon steel unlined digesters has about 4,800 cu. ft. (56 tons to 66 tons) capacity. Cooking time is about two hours. Of interest is the asbestos-panelled digester hood by J. O. Ross Engineering Corp., covering all 8 digesters and providing comfortable operating conditions for personnel by drawing off fumes and heat.

The digester chip loading is indicated and totalized with a Merrick Scale Weightometer.

Digester liquor measuring system consists of 2 level recorders and 2 draw-off valves, all Foxboro. The draw-off valves are operated manually by pneumatic switches. This system is arranged for conversion to a completely automatic system.

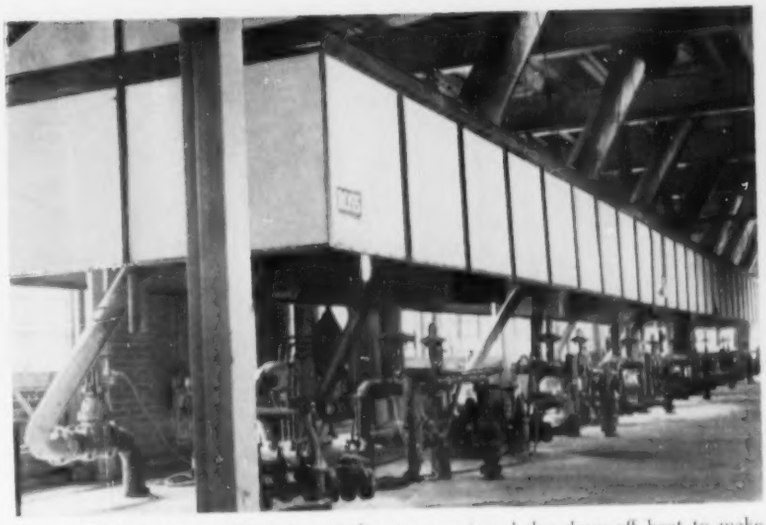
The digester cooking controls were supplied by Mason-Neilan. Foxboro supplied steam admission relief, blow-back valves, (a primary measurement for the digester cooking controls is pressure taken at the base of each digester), a flow indicator for steam consumption and controls for the accumulator condenser temperature.

Blow valves by Yarnall-Waring are seatless, motor-operated and remotely controlled from the digester control room.

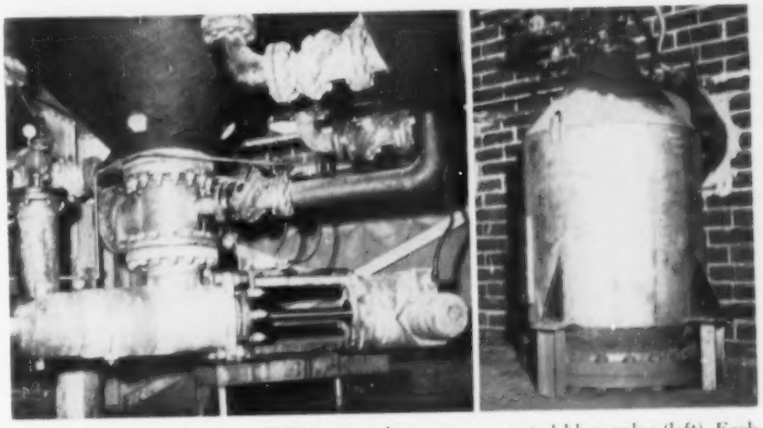
Cooked stock is blown into one of two Chicago Bridge & Iron blow tanks, each tank serving 4 digesters with a capacity of about 3.5 digesters. Consistency at the top is about 12% and an Impco vertical agitator provides mixing and dilution control.

Blow tank dilution is automatically controlled by a Foxboro Dynalog controller which measures motor load on the agitator motor and actuates a diaphragm valve in the weak black liquor dilution line to the blow tank. Blow tank levels are continuously recorded at the digester panel by a Foxboro level recorder whose signal is from a Mason-Neilan Lewis 5500 level transmitter. Flash steam from each digester blow is condensed in an open type scrubber condenser. Some 1,200 gals. a day of crude turpentine are recovered and sold.

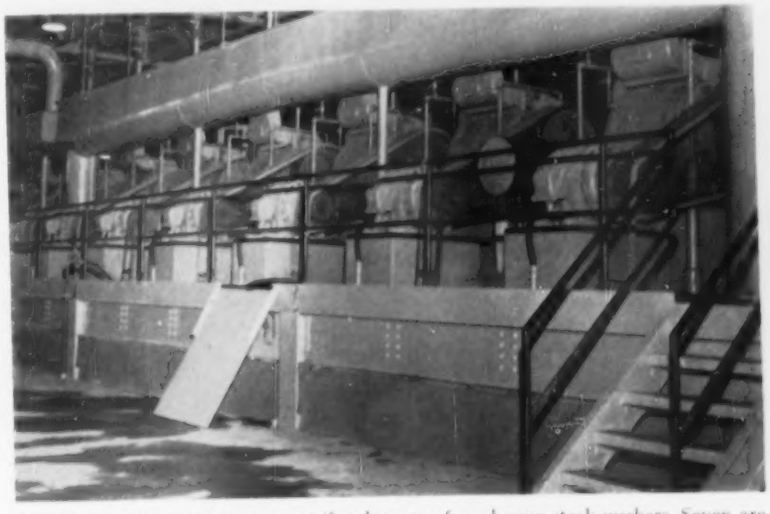
HOW STOCK FLOWS THROUGH PRE-REFINERS—At 4% consistency, the stock leaves the blow tanks, and



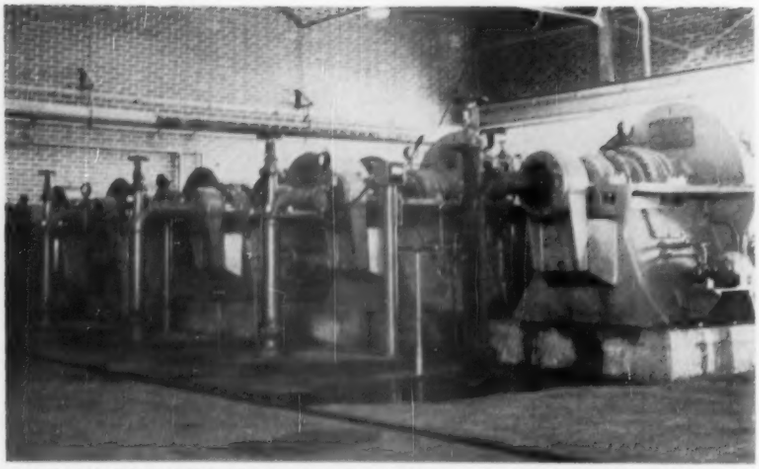
ROSS HOOD OVER TOP of these 8 digester openings helps draw off heat to make working area more comfortable. Chicago Bridge & Iron supplied the carbon steel unlined digester. Control meters are by Foxboro; valves by Walworth.



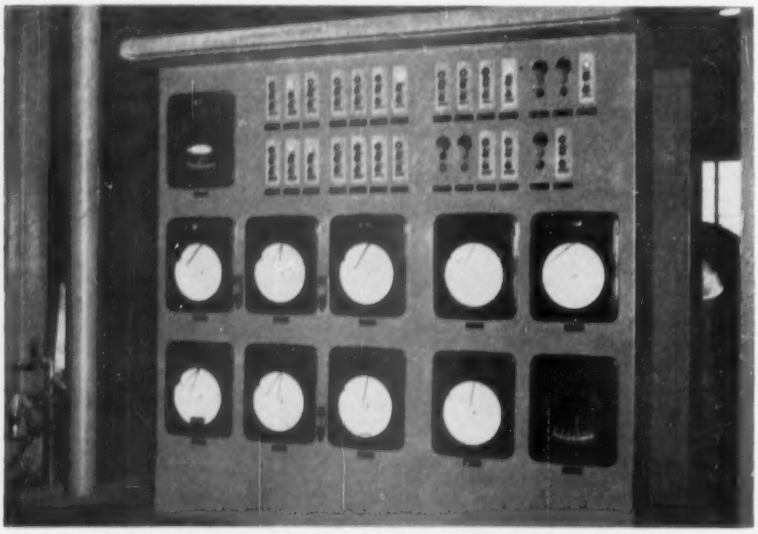
EACH DIGESTER has Yarnall-Waring seatless, motor operated blow valve (left). Each valve is remotely controlled from digester control room. DEZURIK CONSISTENCY regulators (right) control flow of stock to battery of 10 Sutherland refiners.



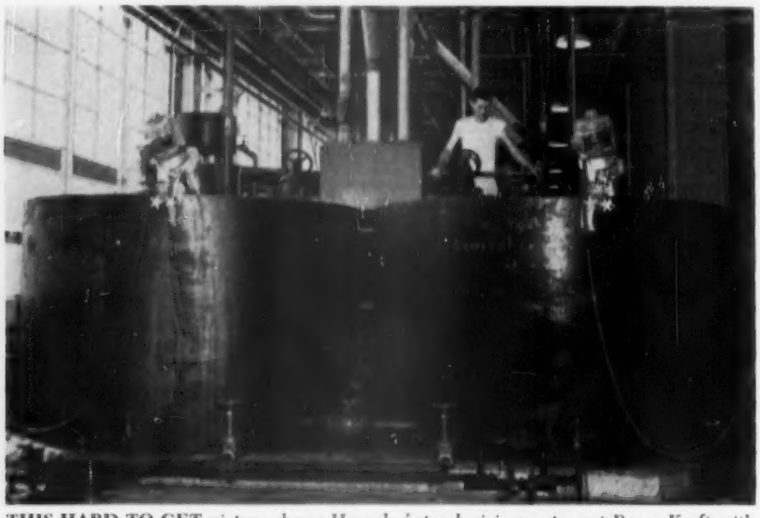
STOCK FLOWS to 10 Impco centrifugal screens from brown stock washers. Seven are primary; three, secondary, taking primary rejects and sending them back to digesters.



REFINING FOR PRIMARY and secondary Beloit pressure inlets is in these 10 Sutherland 48-in. disc refiners. Each is powered by a 500 hp Electric Machinery motor.



CONTROLS FOR BELOIT's 252-in. Fourdrinier are on this Foxboro control panel.



THIS HARD-TO-GET picture shows Hercules' starch sizing system at Rome Kraft with Lightnin mixers on tanks.

the dual flow to two lines of three Emerson Clafin pre-refiners is automatically controlled by a fluid drive on each of the 40 ft. head Ingersoll-Rand hot stock pumps.

Secondary screen rejects are sent to a Jackson & Church pulp press before re-cooking. Usually one cook a day is given over to rejects.

THEN THE WASHING STAGES— Stock leaves the pre-refiners at 3.5 to 4.0% consistency and is diluted to 1% consistency prior to being pumped to two sets of 4-stage Impco brown stock washers. These modern rotary valveless vacuum filters with faces 11.5 ft. by 16 ft. are powered by direct current, variable speed Westinghouse motors with enclosed herringbone type Falk reducers. Each line of washers has a Ross insulated hood with cutaway sections for walks.

Stock flows through the first three stages at 4% consistency at 1600 gpm. At the fourth stage fresh water tempering is about 225 gpm. Of interest is the 40-ft. high Chicago Bridge & Iron foam tank with an Impco foam breaker on top.

Stock flow to each line of washers is automatically controlled by a water purged Foxboro d/p cell transmitter, connected to an insert type Venturi tube. The d/p cell transmits flow measurements to a Foxboro Recording Stabilog receiver controller on the washer panel. This instrument, in turn, actuates a Republic Flowmeters Model 73 regulator on an American Blower variable speed hydraulic coupling, which varies the speed of the pump in the blow tank outlet line ahead of the refiners and assures a uniform stock flow.

Weak liquor dilution to the first stage washer and shower flow to each stage washer are automatically controlled. Conductivity of washed stock and pulp mill sewer is continuously recorded by Dynalogs, equipped with high alarm electrical contacts to warn operators of any abnormal conditions.

First stage filtrate seal tank level is recorded and controlled automatically by a Foxboro d/p cell transmitter and Stabilog receiver controller which actuates a butterfly valve in the discharge line leading to the weak liquor storage tank. Liquor levels in the second, third and fourth stage filtrate seal tanks are also continously recorded as are deckered and washed stock chests and foam tank levels. A remote recording receiver is also located on the washer panel to record the flow of sulfuric acid to the deckered stock chest.

SCREENING AND REFINING— Washed stock is pumped by Ingersoll-

Rand pumps at 1000-2300 gpm to the washers and is discharged from washers into a Stebbins Semtile-lined washed stock chest, which holds about 20 tons of stock at 4% consistency. Agitation is by an Impco horizontal agitator.

A Trimbey consistency regulator regulates the consistency of the washed stock as it passes at 4,500 gpm at 3.5% to the suction of the screen fan pump. Seven screens are primary and three are secondary, taking the secondary rejects and sending them back to reject press and digesters. Screened stock then moves at 1-1.5% consistency to the 9.5 ft. by 16 ft. Impco deckers by gravity flow and then into the deckered stock chest.

Constant water pressure to the centrifugal screen showers is maintained by a Foxboro Model 40 Stabilog recording controller which actuates a butterfly valve in the inlet of the water header line and is equipped with two pens for recording both upstream and downstream pressures on the same chart.

Deckered stock consistency is controlled by a Dynalog which measures the load on the agitator motor and controls dilution to maintain desired consistency. Screen inlet valves are air-operated and are remotely controlled from the rotary screen panel.

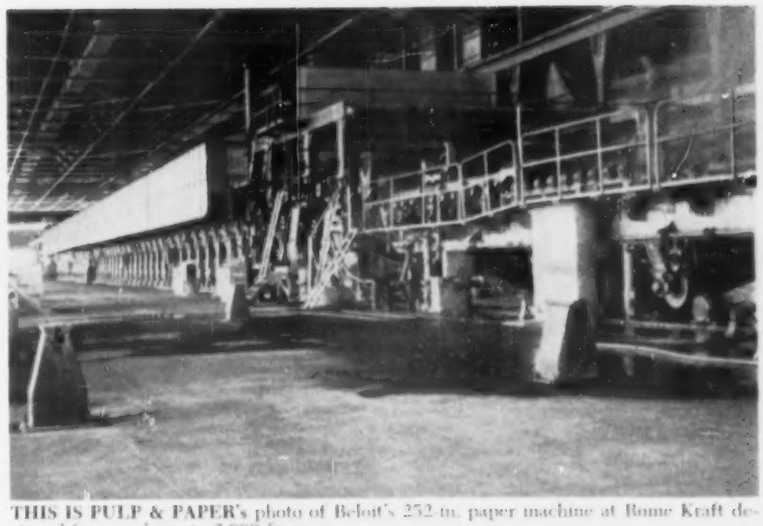
As the deckered stock leaves the chest, it flows through a Trimbey consistency regulator at 3.5% consistency and at 5,000 gpm to a tile-lined evener chest with one Impco horizontal agitator, and then through a DeZurik consistency regulator to the Sutherland disc refiners. Resin size is added at the evener chest. A Hercules sizing system meters size to the stock in the evener chest where it is agitated at 3.5% consistency.

WHAT REFINING ACHIEVES—A feature of the 252-in. Beloit machine is its two pressure inlets. Main function of this secondary inlet is to deposit a shorter fiber as the sheet is being formed, resulting in a better filled sheet.

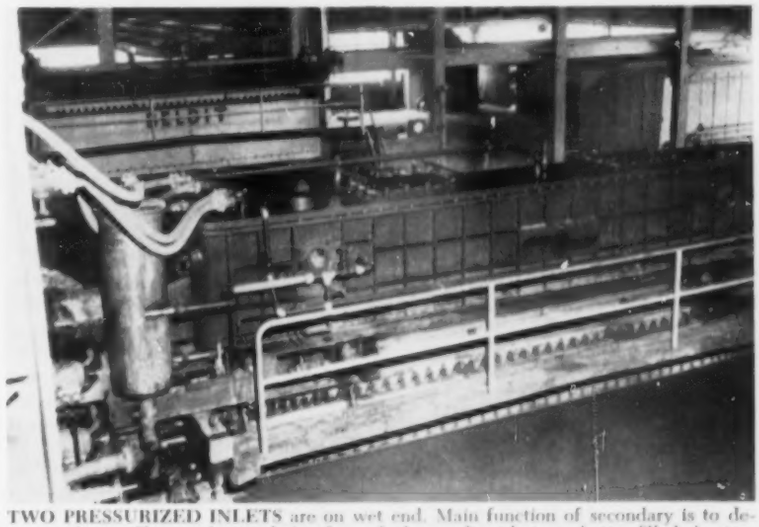
This shorter fibered stock is achieved in the refining operation. Ten primary Sutherland 48-in. disc refiners process the stock for the primary inlet. Two secondary refiners (and one primary alternating as secondary) further refine stock for the second inlet. Each refiner is powered by a 500 hp Electric Machinery motor.

As a 5,500 gpm Ingersoll-Rand pump moves the refined stock to the regulator box, alum is added.

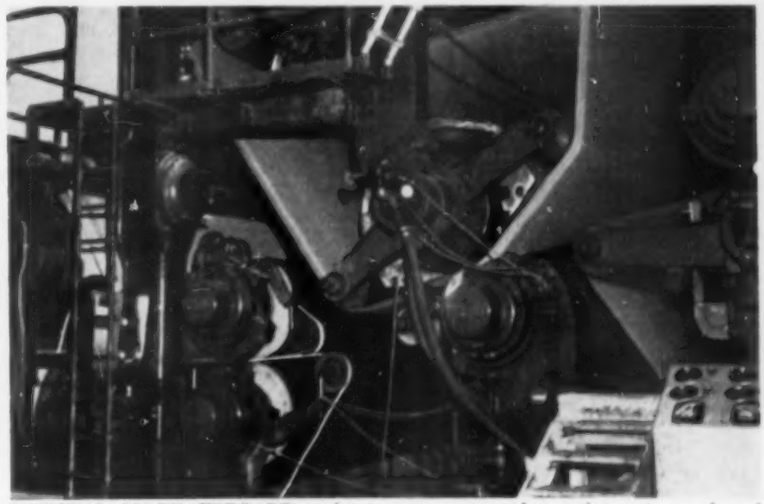
THE TWO INLETS—Stock enters the first inlet at .045% consistency



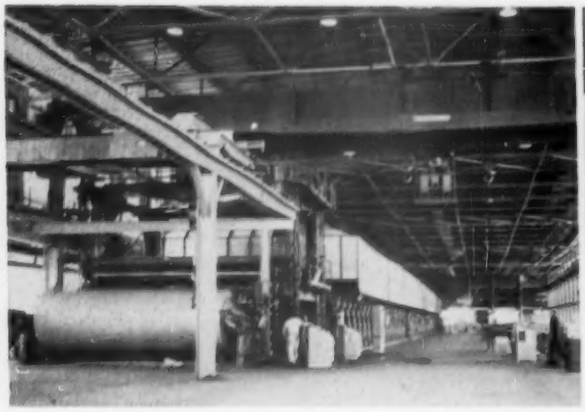
THIS IS PULP & PAPER's photo of Beloit's 252 in. paper machine at Rome Kraft designed for speeds up to 2,000 fpm.



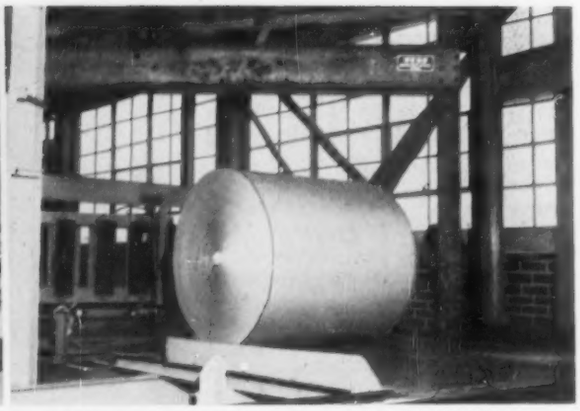
TWO PRESSURIZED INLETS are on wet end. Main function of secondary is to deposit a shorter fiber as sheet is being formed, the resultant being a better filled sheet.



UNUSUAL ON KRAFTBOARD is this inverse press, said to reduce wire mark and lessen two-sidedness. This Beloit vertical-type press boasts some of more modern developments such as air-bleed for faster drying.



SLICK AS A WHISTLE is area around paper machine. Ross dryer hood is asbestos-panelled with removable sections. Dry end features twin Beloit calender stacks with Farreloy rolls.



UNIQUE AND UNUSUAL feature of this lowerator, engineered by Jervis B. Webb Co., is that roll is turned 90°, a quarter turn, as it is lowered to loading dock.

through Beloit's patented stream flow valve, air-motor operated. It is introduced into the air-cushioned pressure inlet through a patented cross-flow distributor. Stream flow valve position is automatically recorded for each inlet. A Nash Engineering Hyton pump supplies vacuum to the primary inlet.

Panel-mounted instrumentation for each inlet is identical, consisting of a level recorder, a recording pH controller which controls dilute alum feed flow and a flow recorder for the gpm rate of alum feed.

Interesting features are incorporated on Beloit's 252-in. paper machine which trims 232 in. on 42 lb. boardweight and can trim as high as 234 in. on heavier stock. The Fourdrinier is designed for 26 lb. to 90 lb. boardweight.

The aluminum body table rolls, 12¾ in. dia., are Micarta covered. Deflectors after each table roll are stainless steel with Micarta tips.

WIRE, NOT FLAT BOXES, OSCILLATE—The 10 flat boxes are unusual in that they do not oscillate. Instead the wire is oscillated by a mechanism working in conjunction with the guide rolls. Only one other mill in the South is said to have this arrangement. A Roots-Connersville pump rated at 6,700 cfm pulls vacuum on the flat boxes. Vacuum is recorded and controlled automatically.

Also unusual is the Beloit wire stretcher with tension indicator which stretches the wire from the outside. Wire return rolls have anti-friction bearings.

Something new in couch rolls is the large 54-in. diameter couch. Two Roots-Connersville tandem pumps pull 10,500 cfm each. Stowe-Woodward furnished the 24-in. diameter lumpbreaker roll which has a 2-in. thick special rubber cover.

The machine has the Beloit differential drive. Each section has its own separate and different gear unit; couch, press, smoothing press, 1st, 2nd, 3rd and breaker stack, 4th and 5th dryers, 2 calender sections and reel. A Link-Belt PIV draw control unit is on each driver section. A Westinghouse turbine rated at 3,000 hp drives the machine. General Electric furnished helper drives.

USES NEW AIR BLEED PRINCIPLE—The Beloit vertical-type press section boasts of some of the more modern developments such as air-bleed for faster drying and inverse suction press. The three 40-in. diameter suction press rolls were covered by Stowe-Woodward, and all are of the spiral drilled design.

From the first suction press, the sheet passes to the second straight through press, to the third inverse suction press and to the smoothing press. Use of this inverse press is said to reduce the wire mark and lessen two-sidedness of the sheet. It is unusual on kraftboard.

Each suction press roll has heavy duty anti-friction bearings and air-loaded packings. The first and second top press rolls were covered by Manhattan Neoprene, and each has a swinging arm with pivot part and necessary air loading equipment to apply and regulate nip pressure between top and bottom press rolls. The top Manhattan Neoprene smoothing press roll is 37 in. diameter. All press rolls are Neoprene covered. Three Vickery felt conditioners in the press section are of the jordan-shoe type.

A majority of vacuum pumps was supplied by Roots-Connersville, including a parallel connected RCV 20 by 46 and 16 by 39 tandem pump on the first and second presses pulling 10,500 cfm and 6,700 cfm respectively. There is one RCV pump pulling 6,700 cfm on the inverse press.

TOP FELT ROLLS UP HIGH FOR A REASON—An unusual feature of the 86-roll dryer section is the location of the top felt rolls up high for the eventual installation of a vapor absorption nozzle. The Ross Engineering dryer hood is asbestos panelled, in removable sections.

All dryer rolls are 60-in. diameter of high pressure design with insulated back journals and operate up to 150 psi. The front dryer frame is bell-type construction and the back dryer frame of latest box type, with completely enclosed gear dryer drive. Back dryer bearings have continuous oil circulation to bearings and gears. The dryer section is in five sections, with a break between the third and fourth sections for a breaker stack of one bottom and one top roll and self-aligning rollers.

All dryer section instruments and diaphragm control valves are by Foxboro and were supplied through Ross-Midwest Fulton Corp. This phase of instrumentation was specially designed for the condensate drainage system and is probably as extensive as any installed in the U. S. A.

The Ross Midwest Fulton automatic temperature control and drainage system was laid out specifically to comply with the following requirements:

(1) Forced vapor circulation in conjunction with positive condensate drainage from the dryers.

(2) Grouping of dryers to allow decreasing or increasing temperature gradients for the intermediate, dry end and after-calender dryers.

(3) Exceptionally wide operational pressure range of the machine from 40 psig to 145 psig.

(4) Thermal economy by reason of using flash steam for water pre-heat-

JERVIS B. WEBB

CONVEYOR ENGINEERING, MANUFACTURE, INSTALLATION and AUTOMATION

ROME KRAFT USES WEBB CONVEYORS TO HANDLE LOGS, CHIPS, BARK AND PAPER ROLLS

In the woodyards of this new southern paper mill, a daily supply of thirteen hundred cords of pine logs from four states is unloaded from railroad cars and trucks onto three Webb chain conveyors. Two conveyors take logs directly to the chippers while third conveyor can carry the logs either to the chippers or storage stacker shown above.

This stacker, which is the largest in use today, is approximately 300 feet long and rises 80 feet in the air. Up to 30,000 cords can be stored by the stacker which travels on a track in a 172 degree arc for about 570 feet. When required, logs are removed from this storage area via flumes and then onto another Webb conveyor to the chippers.

Additional chain, belt, drag, screw and apron conveyors automatically perform such functions as: removing chips from storage bins, carrying chips to digester, and conveying bark to storage or boiler house. Even coal from railroad cars is carried on conveyors to the crusher and then automatically distributed to the boilers.

Within the mill a Webb conveyor system handles rolls 6 feet in diameter and 10 feet long. These rolls, which weigh 10,000 pounds, are carried on roller flight conveyors and slat conveyors from cutting and gluing to banding and weighing. Also, through use of a selector mechanism, finished rolls are sent either to storage or to a slat conveyor located on the shipping dock.

Inside the mill and out in the yard, this manufacturer of container-board uses over 5,000 feet of Webb conveyors in an integrated system that provides highest efficiency in mechanical handling of raw materials and finished product.

4812

Write to us on your company letterhead and we will be happy to place your name on the Webb mailing list to receive factual technical information on conveyor installations, case history reports, and new product literature.

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PULP & PAPER's panorama of causticizing and recovery operations at Rome Kraft. Of interest is Dorr's new concept of green liquor clarifying featuring deep compartments. (For full details, refer to PULP & PAPER, Nov., 1954, p. 102.)

ing.

(5) Integration of the steam and condensate system of the machine room air heaters.

(6) Flexibility of demand load, varying from start-up speeds to a maximum design figure of 2000 fpm.

Since some of the requirements have opposing characteristics requiring the reversal of the direction of flow and variations in the sequence of the separators, it was necessary to provide pneumatic control interlocks to assure automatic, fool proof operation under all conditions.

All dryer groups receive steam from the same source and the residual flash and blow through steam are condensed in the water preheaters of the subatmospheric last stage where the noncondensible gases are continually evacuated. The resulting steady flow and cascading effect assure not only an excellent thermo efficiency due to heat recuperation, but also improve the heat transfer coefficients within the dryers.

A Foxboro d/p cell transmitter measures the pressure differential between the main dry end and the dry end condenser sections. It transmits an air signal to a remote-mounted recording receiver controller which positions a diaphragm valve in a connecting header between the two sections. A similar system is provided for the steam and condensate headers of the dry end condenser section. A three-way air switch and diaphragm valve are provided for venting the rolls to atmosphere for start-ups and emergencies.

Pressure differential control is also provided between the main and intermediate dryers of the wet end section. Differential pressure between steam and condensate headers of the intermediate dryer section is also controlled.

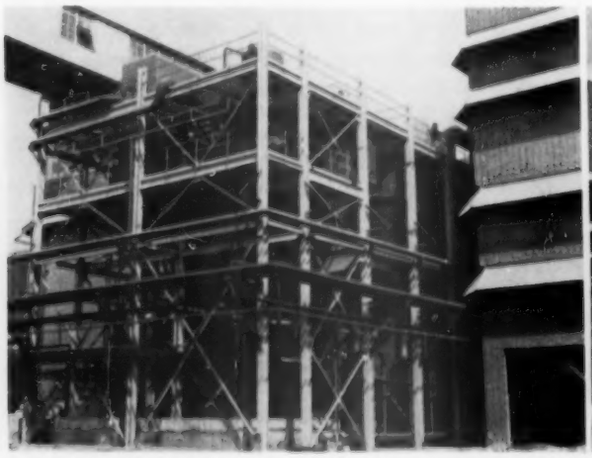
Of interest, too, is the Foxboro Auto-Selector recording controller for controlling steam pressure in the wet end condenser section. However, regardless of its pressure control setting, the instrument will override this setting and control at a lower value if the pressure at the wet end intermediate group drops to a pre-determined differential above that of the wet end condensing section. This insures that condensate from the intermediate section will flash as it passes from the separator to the wet end steam header.

Tile linings for the couch and wire pits as well as for Fourdrinier flat boxes were by Stebbins Engineering.

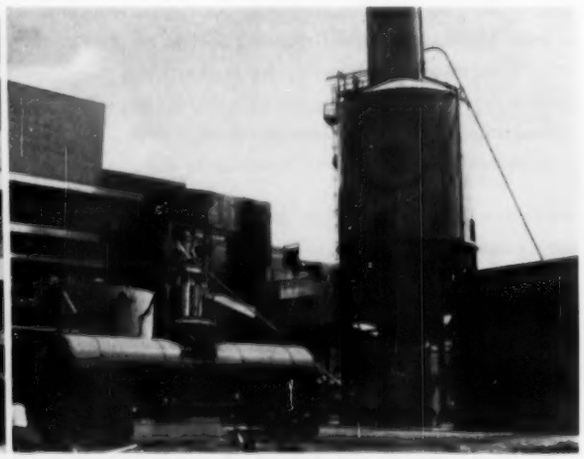
Each of the twin Beloit open side calender stacks has 6 intermediate Farrel-Birmingham Farreloy 18-in. diameter rolls and one 36-in. diameter king roll. Farrel also supplied a two-wheel 42-in. by 304-in. roll grinder.

The Beloit model "L" winder is similar to those at Bowaters Southern and Great Northern's East Millinocket, Me. mill. It is designed for speeds up to 5,000 fpm and has many features designed to reduce manual handling to a minimum. A General Electric motor speed regulator with amplidyne control drives the winder.

Trim broke from the Beloit slitter is processed in a Shartle beater and



BLACK LIQUOR is fed to one of two sets of Swenson sextuple-effect vertical evaporators with counter current barometric condensers housed in this open-frame design at Rome Kraft.



THIS DRACCO "Air-Stream" salt-cake handling unit at Rome Kraft, moves salt cake at 10 tons an hour to process storage before it is fed into mixing tank with the black liquor.

pumped at 750 gpm and 3% consistency to the saveall.

HOW ROLLS ARE HANDLED—The Jervis B. Webb conveyor system handles rolls 6-ft. diameter and 10-ft. long weighing up to 10,000 lbs. From the slitters, rolls are carried by a 64-ft. section roller flight conveyor to a 20-in. wide 10-ft. long slat banding conveyor where rolls are banded and stencilled, and then moved to a 10-ft. long roller flight conveyor mounted on a platform scale. After weighing rolls are directed on a 34-ft. roller flight conveyor segment at the end of which is the lowerator. A special feature of the roller flight conveyor is that rolls can be moved to the end of the unit and blocked and the conveyor continues to bring other rolls forward.

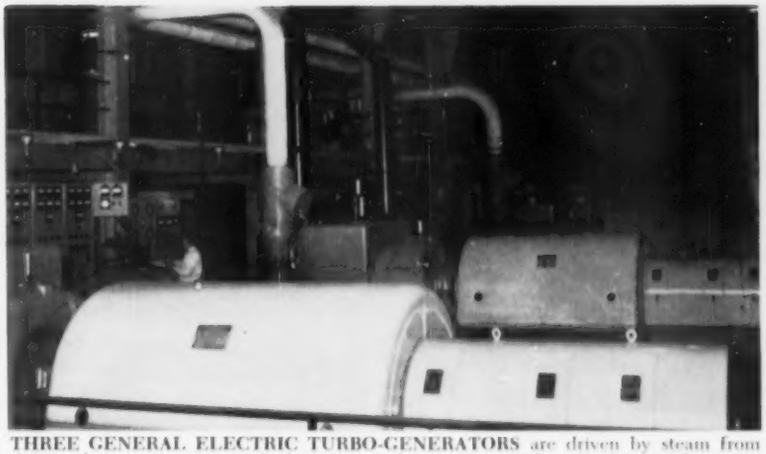
The blocked roll is then kicked onto the lowerator which has a special selector mechanism to direct the roll either to temporary storage inside the building or to the slat conveyor at the loading platform. Unique and unusual is that the roll is turned 90°, a quarter turn, while it is being lowered. The paper roll discharges by gravity onto a 20-in. wide steel slat conveyor which parallels the shipping dock for 365 ft. Fork lift trucks load the rolls into railroad cars where they are steel banded and shipped.

MODERN RECOVERY SYSTEM—Black liquor recovery and causticizing at Rome Kraft are said to be as modern as any in the industry today. Black liquor from the first stage seal tank and from the foam tank is pumped to two 200,000-gal. storage tanks. An Impco Waco filter is used to filter the black liquor and fiber before it goes to the evaporators.

Black liquor is fed to one of two sets of Swenson sextuple-effect vertical evaporators with counter current barometric condensers.

EVAPORATOR OPERATION—Each evaporator has a separate control cabinet and each control system is identical except for minor variations. Steam flow control to the first effect is maintained by a Foxboro Stabilog recording receiver controller and steam flow is measured by an orifice plate and a Foxboro d/p cell pneumatic transmitter.

Boiling point rise is continuously recorded as an indication of the specific gravity of black liquor leaving the first effect, by a Dynalog recorder which measures the temperature difference between a resistance thermometer bulb in the liquor outlet and another bulb in the vapor line.



THREE GENERAL ELECTRIC TURBO-GENERATORS are driven by steam from the Combustion Engineering boilers. Two turbines are 5,000 kw, one is 7,500 kw.

The bulb in the vapor line is installed in a special condensing chamber to measure the saturated vapor temperature at the operating pressure.

Liquor and vapor temperatures in the various effects are continuously recorded by an automatic scanning Dynalog recorder equipped with a selector switch which automatically connects one after another of the temperature sensing elements to the recorder. Bull's-eye signal lights on the instrument case show which temperature point is being measured.

Vapor temperature from the sixth effect is recorded and controlled by a Foxboro resistance Dynalog controller which actuates a diaphragm control valve in the water line to the condenser.

Total flow of weak black liquor to the evaporator is measured by a d/p cell transmitter. An air pressure signal is transmitted to the recording and controlling instrument on the panel which actuates a diaphragm valve in the liquor line to the sixth effect. Flow of liquor to the fifth effect is also automatically controlled to feed the fifth and sixth effects in proper balance.

Temperature and density of the weak black liquor is continuously recorded as are liquid levels in the weak and strong liquor storage tanks and boil out tank.

Two Cascade evaporators increase solids content of the black liquor to 70% before it is sprayed into one of two Combustion Engineering recovery furnaces. Each furnace has a capacity of 150,000 steam per hour.

A NEW PRINCIPLE IN LIQUOR CLARIFYING — A Dracco "Airstream" salt-cake handling system moves salt cake at 10 tons an hour to storage or to the recovery room day tank. From the smelt dissolving tank the green liquor is pumped to the green liquor clarifiers.

Dorr's new concepts for green liquor clarifiers are incorporated in the single deep clarification compartment equipped with a raking mechanism to provide positive removal of dregs from the tank. The feedwell is larger in diameter than in previous tray units and terminates down near the raking mechanism. (This new principle is described fully in a special article by W. B. Gery of Dorr-Oliver in PULP & PAPER, Nov. 1954.)

Clarified green liquor flows to the direct steam contact heater and at 437 gpm to the 7-ft. diameter by 50-ft. rotary lime slaker. A water cooled drag conveyor handles reburned lime to storage from the kiln. Four Chicago Bridge & Iron causticizing tanks, 12 by 11.6 ft., with Lightnin vertical mixers, operate on a gravity feed arrangement. White liquor is then pumped at 437 gpm to the white liquor clarifier, 35 by 24 ft., after which it is stored in two 200,000-gal. tanks.

Lime mud from the white liquor clarifier is pumped to the lime mud washer, to the lime mud feed tank and to the Impco 6 ft. by 8 ft. rotary vacuum lime mud filter. Filtered lime is fed at 31 gpm to one of two Allis-Chalmers 10 ft. and 11 ft. dia. by 175 ft. long lime rotary kilns.

HOW MATERIALS ARE HANDLED IN POWER PLANT—Materials handling is also an important factor in the power plant. Here is an integrated bark and coal conveying system, which for the bark begins under the drum barkers, and for coal, by the special car hopper unloader.

At Rome Kraft bark provides some 15% of steam requirements, and in effect the company recovers about $1.50 per cord of purchased wood as fuel. The storage of peeled wood permits the use of bark in its best pos-

sible condition for fuel. Bark is picked up under the drum barkers by a 468 chain conveyor moving 15 tons an hour of bark at 42 fpm for 58 feet, discharging onto a 36-in. rubber belt moving at a right angle at 300 fpm, carrying 45 tons an hour of bark for 303 ft., discharging onto a 195-ft. conveyor to make a left turn to storage.

Bark from storage is picked up by a H-116 drag chain 90-ft. long moving at 100 fpm to a 36-in. bark belt 410-ft. long and moving at 300 fpm to the boiler house in two segments of 410 ft. and 120 ft. Bark is then discharged onto a shuttle conveyor 30-ft. long moving at 300 fpm.

Coal from the railroad hopper cars moves on an apron 30-in. wide for 45 ft. at 30 fpm to an 18-in. belt 110-ft. long traveling at 300 fpm. Here it joins the bark conveyor housing and moves in two sections, one of 153 ft. long at 330 fpm and one 70 ft. at 360 fpm, joining a 24-ft. segment coal shuttle moving at 400 fpm in the boiler house. Coal from yard storage is fed to the regular coal conveyor by a 33-ft. long shuttle at 350 fpm.

A Raymond coal crusher pulverizes the coal before feeding it to one of three Combustion Engineering boilers, rated at 150,000 lbs. an hour each. Two boilers operate on coal and one operates on coal and bark. Provision is made for future conversion to natural gas.

Automatic controls for the power plant were supplied by Republic Flowmeters.

Steam from the boilers drives the three General Electric turbogenerators, two rated at 5,000 kw, and one at 7,500 kw.

TRAINING OF LOCAL CREWS—PULP & PAPER's story of Rome Kraft Co. has stressed the important contributions by equipment in this mill. The successful operation of such equipment however is heavily contingent upon the men who not only contributed their know-how gained from years of experience at Macon, but also to the mastery of mill operations by local labor, hitherto untrained in such operations. Mr. Kidd told PULP & PAPER that the start-up of Rome Kraft operations was one of the smoothest he had seen.

EFFLUENT IS CONSTANTLY CHECKED—Particular stress has been placed at Rome Kraft on preventing any possibility of harmful effluent reaching the Coosa River. A company boat makes river surveys 5 mi. above the mill to 25 mi. below. Samples are taken at points along the river 1,000 yds. above the mill discharge to about 20 mi. below the discharge. A three-man pollution team works full time making routine analysis through the mill. A 600 gpm Worthington pump moves the effluent to a 12,000,000-gal. effluent or aeration tank.

Four rectangular Clariflow-type water treatment units supplied by Walker Process Equipment Co. have a clarification capacity of 25,000,000 gpd. Each tank is 170 ft. by 22 ft. and about 20-ft. deep.

EXECUTIVES AT ROME KRAFT (l to r): MURPHY J. BROWN, Pulp Mill Supt.; A. J. PARRINO, Paper Mill Supt.; A. D. SIMPSON, Power Supt.; G. W. REYNOLDS, Plant Engineer, and E. V. McSWINEY, Asst. Controller.

OTHER ROME EXECUTIVES ARE (l to r): R. J. KELLY, Industrial Relations Mgr.; FORD JOHNSON, Master Mechanic; R. J. SCHMIEDER, Purchasing Agent; J. S. KIRKLAND, Chief Electrician, and McDEWAIN SANDLIN, Chief Chemist. (See PULPWOOD SECTION for pictures of other key executives.)

New Key Man at Rome

Foster Park, with The Mead Corp. in Chillicothe, O., for 14 years, has been transferred to its affiliated Rome Kraft mill as asst. industrial relations mgr. His father, Delvin, brother, Robert, and sister, Ruth, all work for Mead in Chillicothe, where he was born.

He started with Mead in 1941 as a broke beater helper, and transferred from production jobs to personnel work in 1952, attending night classes at Ohio University branch to augment his training.

Scott To Acquire Interest in New Mill

Scott Paper Co., which owns half of Westminster Paper Co., British Columbia tissue mills, will acquire 29% of the new 425-tons-per-day bleached kraft woodpulp mill to be built at Crofton, Vancouver Island, B.C., by B.C. Forest Products Ltd., according to Pres. H. G. Munro, of B.C. Forest Products. Also, a Nova Scotia minister said Scott may build a 300-ton $35,000,000 pulp mill in that province.

B. C. Forest Products has planned to sell its pulp on the market, and a substantial amount probably will be marketed to paper mills.

Western Kraft Mill Making Up to 120 Tons

Western Kraft Corp.'s new mill at Albany, Ore., operating exclusively on sawmill and veneer by-product wood to make 26 to 69 lb. kraft Fourdrinier board, was producing merchantable products two weeks after start-up. By November, production reached a high of 120 tons in a single day. Pres. Ira C. Keller anticipates output of 40 to 50 thousand tons per year.

Other officers are Exec. Vice Pres. R. V. Hansberger and W. O. Hisey, Wm. Swindells and C. H. Wheeler, vice presidents. Mr. Hisey, is manager of operations, and Hugo Trygg, plant superintendent.

Prime components include a Babcock & Wilcox recovery boiler, Bagley-Sewall machine, 164-in. wire, Combustion Engineering power boiler, General Electric equipment, Dorr-Oliver causticising, Swenson evaporators and washers.

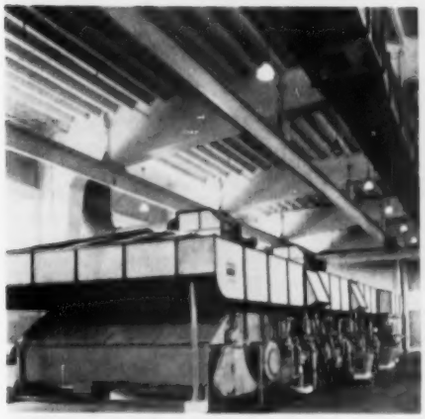
Ebasco To Build Rayonier Mill

Ebasco Services Inc. has been appointed builder of the new $25,000,000 chemical cellulose mill at Jesup, Ga. for Rayonier, it is announced by Russell F. Erickson, vice president in charge of engineering and manufacturing.

The new mill will have annual rated capacity of 100,000 tons, bringing Jesup capacity to over 200,000 tons.

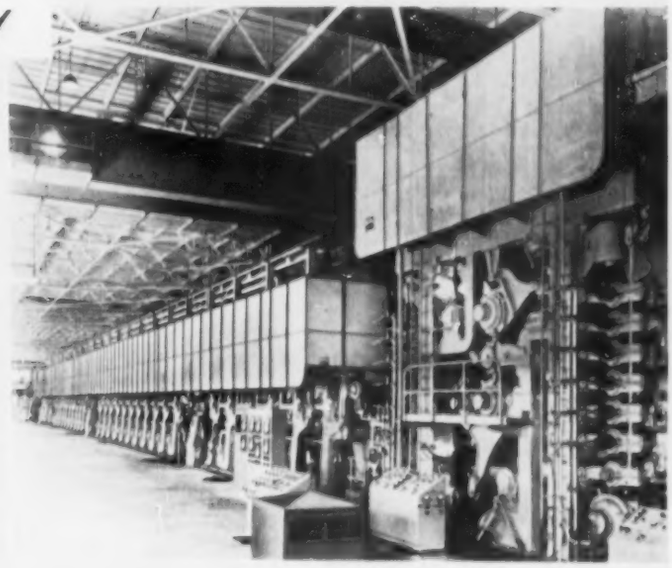
EAST TEXAS

Pulp and Paper Company



Specially built Brown Stock Washer Hood, exhaust and roof system, in Bleach Plant.

ROSS equipment in the machine room looking from dry end: Note man-cooling outlet in foreground.



Joins the notably efficient mills that are

Completely Equipped With

ROSS Air Systems

In their impressive new Evadale, Texas mill, the EAST TEXAS Pulp and Paper Company operates ROSS Air Systems in practically all departments. The Board Machine System includes hoods, heating and ventilating, vapor absorption, felt drying and cooling for calenders and aisles. In the Bleach Plant there is a stock washer hood and heating and ventilating for operating floor. The Screen Room and the Finishing Room are equipped with heating and ventilating. A conditioning unit maintains test conditions for the Constant Temperature and Humidity Room. Down to its Tripper Chute Exhaust System, this fine modern mill is another indication of the increasing use of a ROSS Air System for highest production efficiency.

ROSS SYSTEMS

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ENGINEERS' DISCUSSIONS RANGE—

From Submerging Wood to Pollution

How Bowaters and Crossett licked underwater storage problems; training for electronics; streams cleaner

• Underwater pulpwood storage and problems of upgrading skills to meet maintenance challenge on modern production equipment provided major discussions on the first day of TAPPI's Engineering Conference at Houston, Tex., in early November.

In the past, virgin Southern pine was rafted to mills, but currently used pulpwood, principally or all sapwood, saturates and sinks. Pioneering study on decay was jointly conducted by Southern Forest Experiment Station and Gaylord Container Corp. (1948-49). Subject to decay, stain and fungus in relatively short period of storage, Southern pine loses 5.6% in summer and 3.5% in winter. Wet weather stops pulpwooding operations, increases wood costs. Ralph Lindgren, USFS authority, reported immersion stopped deterioration, but said no record existed on effect on pulping quality.

At this point, the immersing of wood became a brain child of K. O. Elderkin, then Crossett's paper division manager, now Bowaters Southern vice president and general manager. First step, pulping of chips immersed four weeks. Pulping was good but chips picked up dirt. Next comparative tests were in the yard and in Crossett's lake. A twelve-month immersion proved there was no deleterious effect on pulping.

Next came a scale model, 1 in. to 1-ft., 30M cord capacity, of miniature logs for basic planning of handling wood into and out of storage. Consultants were brought in for designing.

M. J. Osborne, Bowaters Southern electrical superintendent, presented a paper on underwater storage with both mills' staff members and advisors as co-panel members.

HOW IT WORKS AT BOWATERS—Bowaters' oblong pond, first completed, has two rotating gantrys for separate storage of sulfate mill wood and selected groundwood mill wood. Operators from the center have automatic control for placing and picking up of logs. Ponded logs are more difficult to pick up. A special "holding" motor prevents slippage of single log with resultant grapple self-unloading. Motor control on cables prevents spinning.

Unloading from barges and lifting from concrete pit of wood scraped from rail cars is by gantry crane with grapple dropping to feeder to turntable. A mobile crane and feeder for trucks, pit or cars provides additional capacity for peak receipts. First turntable selectively discharges to four barkers which feed to second turntable. Here wood is selected for grinders and barked logs sent separately to the pond. Sending and return is by a figure "8" cable installation, common in Canada. Rotating stacker for placing wood is a necessary feature.

HOW CROSSETT SYSTEM WAS DEVISED—At Crossett, a scraper unloads cars to a conveyor leading to barkers. From here a conveyor can bypass the turntable, sending wood to chippers. The turntable sends wood by flume to the 25,000 cord capacity pond, with return by flume. There is a single rotating stacker and a single gantry bridge crane for pick up. Barking capacity is 1500 cords per day, with mill needs 1000 cords. Independent operation is provided and barkers can be run as needed. Water in pond is kept on alkaline side.

PIPING PROBLEM PROGRESS—Correlation studies for friction factor and suspension flow numbers for three sizes of pipe (6-8-12 in.), conducted at U. of Maine, have reached a point of progress so that curves can be drawn that reflect deviations of 30% in 56 cases in one and 30% in 77 cases of another, reported Richard E. Durst.

ACTIVE AT HOUSTON (l to r): JOHN D. LYALL, Project Engineer for Armstrong Cork, whose biggest job was directing design and construction of its Macon, Ga., plant, is National Chairman of TAPPI Engineers; E. L. COWAN, Chief Engineer, Bowaters Southern, who told Houston meeting how to use maintenance men on new installation work, and M. J. (JOHNNIE) OSBORNE, Electrical Supt., Bowaters Southern who explained improvements in its underwater storage and wood handling setup.

POLLUTION REDUCED 25%—On pollution control, an extensive report with illustrative slides covering types of engineering installations in this field was read for Dr. Harry W. Gehm, National Council of Stream Improvement's top technician, by Howard Brown, resident engineer for the council. George W. Griffith, West Virginia P & P, chairman of the new Sanitary Engineering Committee, indicated the activity course will be to submit to mill engineers papers from authoritative sources. He stressed increasing importance of this field. It was reported that stream pollution has been decreased by 25%, even while industry capacity has doubled.

USING MAINTENANCE MEN ON NEW INSTALLATIONS—Moderate use of a maintenance force for new installation work, if time is not too important, was indicated by E. L. Cowan, Bowaters Southern's chief engineer, as yielding an all-year occupied force, capable of satisfactory results in case of a major breakdown and economically justifiable. If time is of the essence, special expensive equipment necessary, special skills required, or unbalanced forces involved, the contract method has desirable aspects.

CLEANING SUCTION ROLLS—Rubber covered rolls, in fact all suction rolls, should have a consistent maintenance cleaning program, said R. H. Smith, Beloit Iron Works. Where products are not too varied, and no size used, a regular time schedule can be devised. On variable production, thorough, frequent inspection is recommended. Methods of cleaning were briefly presented.

ELECTRONICS CALLS FOR TRAINING—Electronics, advanced electrical installations, and instrumentation have brought about a necessity for training both present maintenance crew men and newcomers. This discussion started with panel talks on selecting new employes. Participants included E. J. Bartlett, Union Bag, as moderator; Wayne Smith, Crossett; Leonard Menius, East Texas

P & P; and Dallas Henry, Gair's Southern Advance Division. First problem is selection of men who will not wash out after two or three years (after company spends about $5,000 annually on wages, fringe benefits, etc.).

Crossett is highly selective; now has a 2-year I.C.S. electronics and instrumentation course with 4-hour weekly work-time paid-time class room lectures by mill staff. Other courses are now being worked up. Program started with supervisory, then moved down.

Union Bag has a 20-company staff for voluntary night school with a wide range of subjects. Has special courses about company policies and economics for supervisory men, also courses on how to handle upgrading work for their men.

HOW TO STOP CORROSION—Cataloguing the many causes of corrosion and remedial steps, L. G. Pfeiffer, A. O. Smith Corp., presented a concise report covering a previous roundtable committee discussion. (See his article in PULP & PAPER, Sept. 1955, p. 94, "What it Costs to Repair Digesters.")

Circulation impedence is credited with several causes of corrosion: lack of uniform chip size impedes channeling of liquor; uneven piling of chips impedes liquor circulation and to some extent may cause "hot plate boiling" because of deflection.

Simultaneous introduction of chips and liquor so the latter will serve as a packer may cause hot plate boiling corrosion or may lead to overloading and impaired circulation. Excessive liquor volume will deter circulation startup; scant volume causes chip scorching and erratic circulation.

Introduction of liquor through an internal fill pipe extending to near the digester bottom requires care that chips cover the discharge opening before flow start to prevent spilling onto cone area and causing erosion or corrosion. Also, 8% of obtainable chip volume may be lost due to floating.

Less corrosion results from liquor charging after completion of chip filling but this increases charging time and reduces chip volume. Not as good is introduction of liquor in the center of chip flow, which must be kept even all around, or corrosion may result on the low side.

Some mills successfully use a false bottom with perforations in the center portion through which liquor is supplied after chips have been introduced. The problem appears to be keeping the liquor away from hot, bare digester walls. One tumbling digester installation uses conventional horn for black liquor but white liquor is introduced through a perforated distributor ring in the upper portion, the ring being used subsequently for steam.

Steam introduction must be uniform and where multiple nozzles are used they should not be fed from a common header pipe. Uneven steam feed distorts circulation. If steam is introduced through the shell the nozzles should be projected inside with perforated pipe removable through the opening.

On mechanical circulation digesters, a carbon steel plate welded between strainer and shell will diminish but not eliminate corrosion. Outlet nozzles should be in multiple, which is current practice.

Control of streak corrosion seems quite simple. In blanking off, the plate should be inside the shell, not outside. Nozzles should be projected into the digester, not stop flush with the shell.

Removal of (steel) scale by sand blasting is recommended to reduce accelerated corrosion due to electrogalvanic action. However, uniform calcium carbonate scale tends to protect kraft digester carbon steel walls from corrosion. Alloy linings are protected under alkaline scaling. Roughened surface from sand blasting promotes scale formation. Mills are evaluating this situation.

Sulfite process is the reverse. Scale promotes pitting in alloy digesters. An

HEARD FROM OR SEEN AT HOUSTON (l to r): DR. HARRY W. GEHM, No. 1 technical man for National Council for Stream Improvement, wasn't there but his paper was read, which reported mill streams are 25% cleaner, despite expansion; ROLAND A. PACKARD, Parsons & Whittemore, a world traveler on paper projects, who chairmanned mill planning session; I. W. MARCILLE, from Pensacola, Fla., Impco's senior man in the South; MATT T. FINN JR., down from Schenectady where he is manager of Pulp and Paper and Lumber sales for General Electric; and KARL R. BENDETSEN, a former Washington State man, now Division Mgr. of Champion's Texas Mill, hosts at Houston.

HEARD AND SEEN AT ENGINEERS CONVENTION (l to r): W. M. EMMONS, Westinghouse; ROBERT T. INMAN, Union Bag's Chief Engineer for Construction; GEORGE R. LYDICK, Plant Engineer, Beckett Paper Co., Hamilton, O., an ex-Crossett man; RUSSELL KNAPP, Power Engineer for Mosinee Paper Mills, Mosinee, Wis. and HANK STOESS, "Mr. Paper Industry" for Fuller Airveyor systems and a regular at the engineering sessions.

AT HOUSTON (l to r): RICHARD E. DURST, University of Maine, gave another report on pipe friction and flow studies; SID DREW, from Portland, Ore., President of Drew Engineering; R. C. BERGER, on hand for General Electric, gave talk on different electronic analyzer; RUSSELL SEIP, still a Consultant for St. Regis, but who has hung out his own engineering shingle in New York and Pensacola; and RALPH J. KUTCHERA, who did important work for Rayonier in building its new mill at Jesup, Ga.

area protected by masking tape on Type 316 on a sulfite digester before sand blasting preserved its original 2-D mill finish. On roughened sand-blasted surface a tight calcium sulfate scale formed which, if permitted to build up, could result in pitting corrosion and stress corrosion cracking.

EVAPORATION BY THERMAL COMPRESSION—Application of the thermal compression method for evaporation of spent liquor in the pulp mill was portrayed by R. V. Kleinschmidt, of The Bowen Corp., Cambridge, Mass. This application is now found in the gas field. Greatest savings are experienced in installations having 80% to 85% efficiency in turbine efficiency and equivalently high compressor results. The installation may be added to an existing evaporator system.

A VARIETY OF PAPERS, AND NEW VIEWS—Experience in corrosion was given by A. Tirado A., Fabrica de Celulosa, Tlalpam, D. F., Mexico. The mill uses softwoods, hardwood, bagasse, and straw. Corrosion does not appear to vary between raw material.

Paper mill requirements in air filtering are moderate, occasioning use of the viscous impingement filter, ranging from disposable to automatic self cleaning type, reported James W. May, American Air Filter Co.

R. E. White, Villanova University, described condensate siphoning in dryer rolls, the paper being presented by A. J. Cirrito, of Rice Barton.

Experience at Union Bag & Paper Corp. in use of gasoline-powered versus electric trucks revealed the latter have a maintenance cost edge of 2.5 to 1, according to L. F. Carriker. Final fuel cost is 12% less for battery trucks.

Gasoline-fueled trucks for comparable capacities are lowest in initial cost and embrace 80% of sales today compared with 25% back 17 or 18 years, said W. A. McKenzie, chief engineer, Simpson Paper Co., Everett, Wash. When idling time is high, L.P.G. fuel can be used but insurance rates are higher.

CHUCK-WAGON GET-TOGETHER. Reliance Electric & Engineering Co. men were hosts at a Sunday pre-convention chuck-wagon barbecue get-together, six-guns, Texas hats, silver dollars and everything else that goes with it. FRANK DENISON (left), Houston, Southwest Manager for Reliance, did a terrific job in planning the memorable event. RUDY HERBIG (right), Chicago, Central States Mgr. for Reliance, flew South to lend him a hand.

H. O. TEEPLE, International Nickel Co., New York, becomes general secretary of the engineering division, succeeding W. C. Bloomquist, General Electric Co., Philadelphia. **EDWIN H. OLMSTEAD,** Eaton-Dikeman Co., became chairman of the drying and ventilating committee, succeeding **CURT A. YOUNG,** Riegel berly-Clark Corp., is chairman of a newly Paper Co. **MARVIN F. GADE,** of Kim- formed instrument committee. **RUSS D. IRWIN,** of Minneapolis-Honeywell, is secretary.

Experience with liquid petroleum gas by Lockheed Aircraft Corp. was reported by L. J. Rowley. Investigation resulted in adaption to propane gas. Use of the diesel power unit for industrial trucks was covered by D. D. Hall, The E. B. Eddy Co., Inc., Hull, Que.

HOW ST. REGIS CHECKS MOTORS—Initial treatment of new motors received at St. Regis's Buckport, Me. mill, is company number identification followed by complete take-down for checking, reported N. L. Danforth. A complete set of records affords full details of the motor and its location when put into service. Regular checking and maintenance in service is provided. Use of a "listening pic" catches trouble in the making.

SELECTING ELECTRICAL SYSTEMS—In selection of system voltage for pulp and paper mills, said H. C. Swannell, of J. E. Sirrine Co., experience has shown it to be advisable to select the system voltage permitting at least doubling of capacity without resorting to external means of limiting possible fault currents, even at the expense of economic considerations. Based on assumed generator loads, the use of 2400 volts for system voltage should be limited to systems of less than 5000 kva; 4160 volts to 5000 kva; and 7500 kva initial capacity. Systems in excess of 7500 kva should be at 13,800 volts. Use of the intermediate 6900 volts presents no advantage and 13,800 volts should be used instead.

Step by step expansion of the electrical system at Union Bag & Paper Co. to accompany increased productive capacity was outlined by H. B. Grecar, General Electric Co., Atlanta, Ga.

W. M. Emmons, Westinghouse Electric Corp., Atlanta, presented typical specification guides covering apparatus for electrical systems.

Other electrical papers include one by D. E. Bivins, Jr., Brown Paper Mill Co. on "commutation problems" and a data sheet on electrical sectional drive down time by H. F. Sorenson, Union Bag & Paper Co.

Only through disturbance of present mill practices will burning of calcium base spent sulfite liquor be established in the industry is the conclusion of Frank H. Coldwell, Manager of power, Nekoosa-Edwards Paper Co., whose paper was read by Russell V. Knapp, power engineer, Mosinee Paper Co.

Five steps were outlined for successful burning. Cooking at maximum concentration of liquor, which involves chip packing and indirect cooking; minimum dilution of liquor in collecting; evaporation to maximum concentration; burning at highest efficiency; and installation of fly ash equipment. Reduction to fuel must not exceed cost of coal.

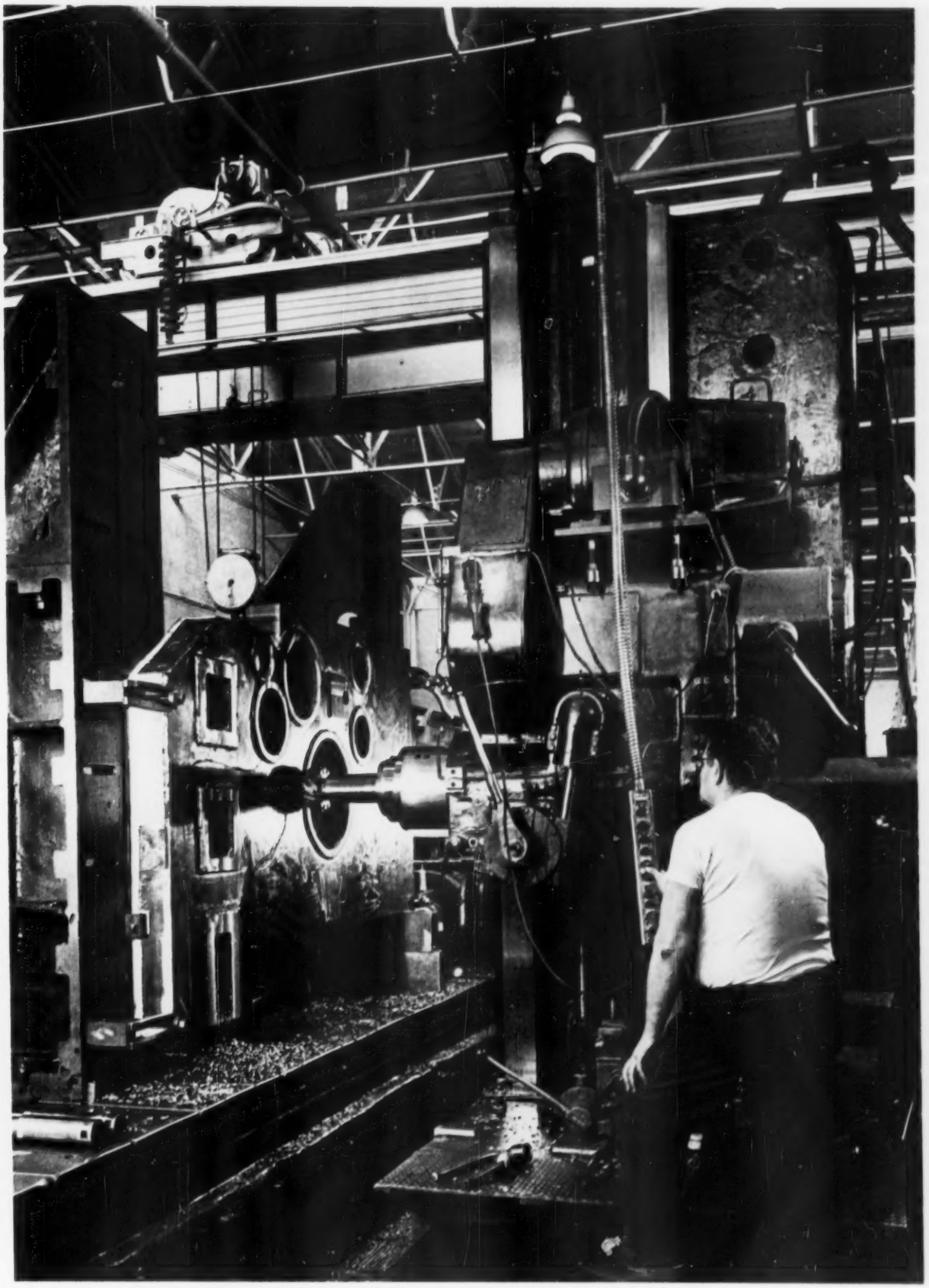
Stainless steel may solve corrosion problems if vacuum washers are installed, and scaling in evaporation can be overcome by utilization of the Rosenblad or "channel switching" equipment. In Norway and Sweden, 25 mills are burning spent sulfite liquor. In Germany 22% of this liquor is burned for fuel and the balance sold.

Of three mills in Wisconsin burning sulfite, one combines it at 62% with coal, one with a vertical type burner at 57% with 70% efficiency, and one at 50% with spray underfeed spreader.

Use of good order standby equipment for "trial runs" for training operating crews to meet an outage with minimum lost time, reported by A. F. Richards, Champion Paper & Fibre, stirred a number of listeners, one of whom said he had to call shift men back on overtime so they could participate in regular start-ups. Mr. Richards described the Hamilton, O. mill power house, and methods used for keeping crews alert and equipment in good order.

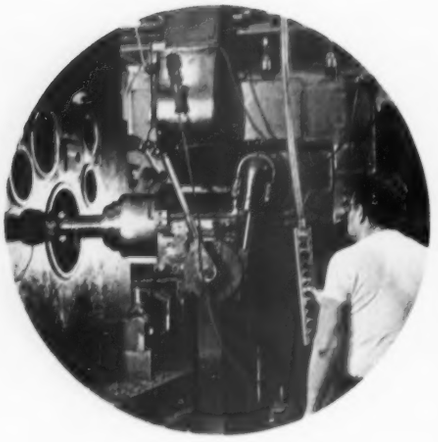
A Tip From Elderkin

This is the only industry that concentrates heavily on engineering and if you are to have your qualified staff when you arrive at management level, you'd better contact the high school students to sell them on an engineering course with a pulp and paper job to follow. This was the gist of what K. O. Elderkin, Bowaters Southern Paper Corp., and president of TAPPI, said to the Engineering Conference. In citing the engineer shortage, Mr. Elderkin said he knew of three vacancies third hand top that have been unfilled for six months.



TORBEL KOELLING

MILLING A BIG ONE . . . *South Shop at Beloit Iron Works.* | *For further details, please turn the page.*



MILLING A BIG ONE

Pictured on the preceding page is one of the large milling machines located in the south machine shop at Beloit Iron Works, Beloit, Wisconsin. A spindle travel of eight feet vertically and 22 feet horizontally permits machining of large bulky castings and fabrications like the one pictured: the pond side for an air-cushioned inlet. Skilled machinists working with modern machine tools make each Beloit product a precision product built for years of dependable service.

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"BEFORE AND AFTER" TALKS—At left, DAVE WETHERHORN, Southern Paperboard Corp., Program Chairman of Alkaline Pulping Conference, and VERNON WOODSIDE (middle), Olin-Mathieson, New Orleans, listen as ARTHUR POLLACK, of Tall Oil Assn., New York, tells more about new tall oil developments. At right, FRITHJOF LOSCHBRANDT (left), of Norwegian Pulp and Paper Research Institute, Skoyen, Norway, discusses Southern mill practices with MALCOLM B. PINEO, Tech. Dir., Brunswick Pulp & Paper Co., chairman of the conference.

New Techniques in Alkaline Pulping

Impressions of papers given at Chattanooga Conference by a veteran observer and participant in these events

By PETER B. BORLEW

Technical Director, National Container Corp., Jacksonville, Fla. and Member, TAPPI Alkaline Pulping Committee

• As is becoming the very laudable custom one afternoon at the Alkaline Conference was devoted entirely to a semi-chemical pulping session sponsored by the Semi-Chemical Pulping Committee of TAPPI.

The whole program offered a balanced mental diet of contributions. The quality level of papers was, to the recollection of the writer, never higher in these meetings, the mill visit—this one to Bowaters Tennessee Mill—rarely as enticing. And still the attendance dropped somehow.

The writer takes the liberty to venture a bold hypothesis for this regrettable phenomenon. It appears to him that the press coverage is improving, inducing many a technical man to stay home in anticipation that "it will be published in the magazines anyway." He misses entirely the chance to exchange information, gather experiences, find solutions to "headaches" by buttonholing a friend, an acquaintance or stranger who unsuspectedly may have on his finger tips just what one is looking for all the time.

Wise management has long ago recognized this aspect of the meetings and very often a travelling expense account dollar is multiplying itself into a sizable production savings or sales dollar. Another advantage the home or office reader foregoes is the benefit of asking questions, enlarging on specific points, of registering dissent with the author of a presented paper, in brief, of participating in the public discussions, the real motive for oral presentation of papers in learned societies.

Unfortunately very few people took advantage of discussions at this meeting and the program ran shamelessly on time, with quite some of it to spare. This was by no means a healthy symptom. Many of us authors developed something like an inferiority complex, failing to kindle either a heated, or a dignified, nor any discussion whatever.

THIS HAD TO BE SEEN—A vivid illustration of the value of personal attendance was the paper presented by T. L. Gilles and G. M. Ference of Brunswick Pulp & Paper Co. on "Deterioration of Straw-Piled Pulpwood." The authors had the excellent idea to color-film numerous spacimens of wood, in different stages of deterioration, and the decaying agents causing it. The color slides shown represented the most appropriate visual aid

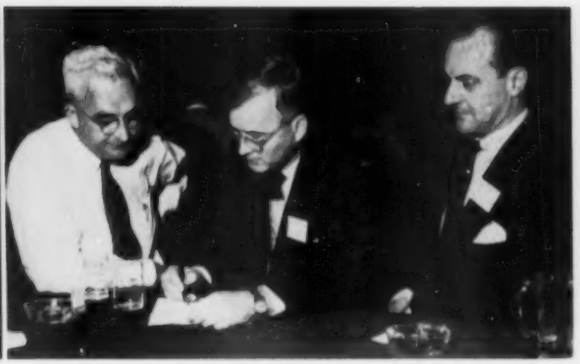
PETER B. BORLEW, National Container Corp., Jacksonville, who wrote this appraisal of Alkaline Pulping Conference, especially for PULP & PAPER.

PULP & PAPER invited Peter B. Borlew to write for its readers an evaluation and a review of the annual TAPPI Alkaline Pulping Conference, held recently at Chattanooga, Tenn. Mr. Borlew's views, are of course, his own.

But his qualifications for writing this review are considerable. He is himself an active member of the Alkaline Pulping Committee. He is also chairman and member of several project subcommittees of that committee.

He is technical director of National Container Corp., Jacksonville, Fla., and formerly was technical supt., technical advisor and a researcher in mills of the industry and in government service. He is a graduate of the Cellulose Chemistry School of the Hessian Institute of Technology, Darmstadt, West Germany.

PROGRESS REPORT ON SLAKING—DAN C. GILLIESPIE (left), of Dorr-Oliver Inc. in Stamford, Conn., discusses two-stage slaking. WILLARD DAHLBERG (middle) and W. E. CARTER, of International Paper Co., quiz him.



QUESTION FROM THE FLOOR—A. W. "TONY" PESCH, of International Southern Kraft Division, answers question by G. H. WHITESIDE, Pulp Mill Supt. at Container Corp. of America, while JACK LIMERICK, Research Director at Bathurst, second session moderator of Chattanooga, looks on.

medium on the subject and no black-white photos or illustration will ever convey the knowledge so exhaustively.

Unfortunately, it would be too expensive to attach this collection of color-prints to a publication. The paper consisted of two parts—woodyard studies and pulping studies. The conclusion drawn from extensive studies of pine, red oak and gum of mid-spring, mid-summer and early winter origin was that none of these three types are resistant to decay.

Spring and summer wood was held for six months; the early winter for eight. In general, highest losses in specific gravity are incurred during June to September while the lowest losses fall in the November-January period. The percent loss range for all three wood species is from 3-7%. Bleachable grades of sulfate pulp produced from such decayed wood showed greatly reduced tearing strength. However, burst and tensile are not as adversly affected. Pulp yield on dry wood basis is of course reduced and more alkali required to cook.

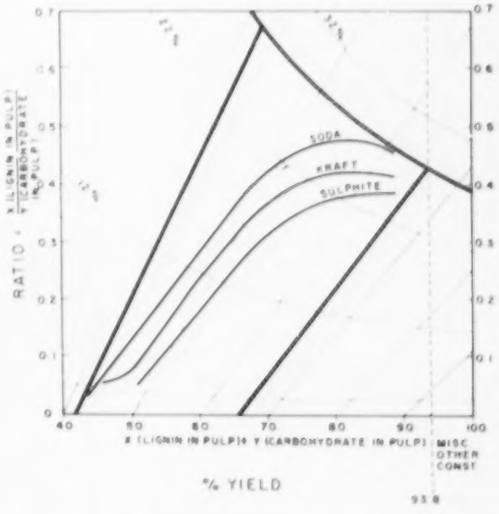
Another paper on deterioration, "Southern Pine Kraft in High Density Storage," was presented by J. E. Ayer of the University of Alabama. Toxicant additions of up to 0.02% proved ineffective to prevent microbiological growth.

The new head of the pulp and paper curriculum at the same University, K. H. Lauer, shared his experience in South America in comparing sulfate pulps from mixed tropical woods with industrial kraft pulps from South America hardwoods. The abundance of species, e.g. 80 on one single acre, complicates any investigation. However, it transpired that if soft and hardwoods are cooked together a lower quality pulp results. Neither is mixed in beating advantageously.

NEW ROSS DIAGRAM EXPLAINED—The paper of W. D. Kerr and S. A. Harding, from Pulp and Paper Research Institute of Canada, on "High Yield Sulfite Pulping of Poplar" was held in the semi-chemical pulping session and was preceded by an extemporaneous presentation by J. H. Hart on the theory of the so-called Ross Diagram which is applicable to alkaline pulping investigations, too.

In the prehigh yield era of pulping the conventional unbleached pulp consisted essentially of cellulose plus a little lignin. The development of semi-chemical processes (which is a combination of chemical reaction and mechanical fiberizing) has now changed this simple relationship radically. By arresting chemical extraction of the wood at an early stage and continuing the fiberizing mechanically, such processes produce a pulp which still contains, in addition to the cellulose, large amounts of lignin as well as carbohydrates.

The ratio of lignin to total carbohydrates (including the cellulose) is not necessarily the same in two pulps of the same yield from the same wood (see R. K. Strapp, Pulp and Paper Mag. of Canada 56 no. 3: 179-185, 1955). Liquor composition, tempera-



EXPLAINED AT CHATTANOOGA—The new Ross Diagram, developed at the Pulp and Paper Research Institute of Canada, is applicable to alkaline pulping, too. This was explained in a talk at Chattanooga. Diagram shows how it is used to compare soda, kraft and sulfite cooking of the same wood. From composition of any given wood a "pulping area" can be constructed on a Ross Diagram. The position of the boundaries will vary according to the composition of the raw material. The residual lignin and residual carbohydrate of each pulp produced in the series can be plotted and will be found to lie within the "pulping area" for that particular starting material. A line connecting the plotted points within the pulping area becomes, as it were, a "route" on the "road map" of the Ross Diagram. It shows the course taken by the cooking treatment in terms of removal of constituents. It can serve as a guide to the interpretation of results and to potentials of varying treatment.

MANY ARE THE DISCUSSIONS—(Left) W. S. "PAT" YUNKER, of S. D. Jones Company in Atlanta, and his wife ISABELLE, renew an old friendship with JACK LIMERICK, Research Director of Bathurst Power and Paper Co., Canada, during hospitality hour at the conference. (Right) PAUL J. SCHMITT, (left) and RALPH STRAUSBAUGH, both of the P. H. Glatfelter Co., Spring Grove, Pa., discuss industry news with HENRY SZEPAN, Impco.

ture and time and possibly other factors will influence this ratio. If X designates the lignin and Y the total carbohydrates (including the cellulose) then X plus Y is the yield of a given chemical cook.

The Ross Diagram technique also delineates the pulping area within which the relationships of residual carbohydrates and lignin for all chemical and semi-chemical pulps from a given wood can be expected. Based on complete analysis data one is in a position to recognize comparative yields for various degrees of delignification and the relative degrees of destruction of carbohydrates. The curves also provide a picture of the degree of simultaneous extraction of the lignin and the carbohydrates at various stages or by different processes. It is probable that the Ross Diagram technique will become a valuable tool in research as well as in operational control.

Kerr and Harding studied pulping of poplar chips in solutions containing a fixed amount of NaOH to which varying amounts of SO_2 were added. Another variable was the cooking temperature. The total yield reached a maximum with cooking liquors containing a mixture of Na_2SO_3 and $NaHSO_3$. Applying the Ross Diagram technique the authors found that the amount of carbohydrates retained for any particular delignification decreases as the temperature is raised. These experiments were carried out on a 100g scale but further plans call for 2 cu. ft. volume digestion. Studies on southern pine and spruce are also under way.

PENETRATION OF WOOD—In continuation of his studies on "Penetration and Diffusion in Wood," J. E. Stone, Institute of Paper Chemistry, compared in this respect the penetration of 0.25/M Na_2SO_3 and NH_4SO_3 solutions into wood of different moisture content such as oven-dry, water saturated, 100% moist. By subjecting wood samples of various size which were penetrated to a different degree to dry heating the unpenetrated portion would carbonize and the samples thus become suitable for a black-white photographic technique tracing the degree of penetration.

The water saturated samples were least burned, next came the oven-dry ones while the 43-100% moist ones were most burned. A further refinement of the method consisted in ashing the different zones of penetration and comparing the amounts of ash. More ash was obtained with the water saturated than with the air dry samples confirming the penetration test.

The rate of penetration of cooking liquor into wood also played some part in the paper presented by the writer (P. B. Borlew, National Container Corp.). This paper was intended to be an "in between" a literature review and a "where do we stand?" study on "Problems Related to the Consumption of Na_2S and NaOH in Kraft Pulping."

Results of the application of the Borlew and Pascoe method to determine Na_2S in black liquor in conjunction with the status of knowledge of chemicals consumption during a sulfate cook were reviewed. The findings of this method have been confirmed by others to the effect that only a fraction of the Na_2S but almost the entire NaOH is consumed during a cook. Reactions of the inorganic compounds of white liquor upon dilution and heating as they may occur in an early stage of the cook were presented. Questions arising from probably evolved H_2S gas upon heating of the digester were brought up.

NOT REALLY IN THE DARK—The familiar slide screen forms backdrop for J. E. STONE, of Institute of Paper Chemistry, Appleton, Wis., as he opens extra-session on Semichemical Pulping during last day of Alkaline Conference. Although in the dark, he had the facts on Penetration and Diffusion in Wood.

The degree and effect of hydrolysis of Na_2S and of its unhydrolyzed portion during the initial stage of a cook were also discussed. Literature references indicate that Na_2S is a good pulping agent in contrast to NaHS. Therefore the part sometimes ascribed to the latter with respect to thiolignin formation would call for supporting evidence.

The contention voiced elsewhere that most of the Na_2S supplied by the white liquor is in excess of what is needed may activate the idea of low sulphidity cooks. From theoretical considerations it would appear that this type of cook promises the most economical use of Na_2S at high molar concentrations of Na_2S and NaOH, combined with a judicious recycling of black liquor and the use of dry wood.

RECYCLING BLACK LIQUOR—The role of "Recycled Black Liquor in Sulfate Pulping" was systematically investigated by V. F. Mattson (now with The Mead Corp.), while the author was still at the Institute of Paper Chemistry. He reported at the meeting that the organic materials are relatively unaffected by the recooking. He further concluded that recycling does not result in a consumption of white liquor chemicals. However, the organic material has an effect on the permanganate number and the brightness.

According to this writer's (Mr. Borlew's) paper, the ratio of the recycled black liquor to the white liquor has a bearing on the degree of the hydrolysis of Na_2S in the final cooking liquor by virtue of its water content. In a statistical (factorial) study of the influence of (a) residual effective alkali, (b) organic material, and (c) residual sulfide content of the recycled

black liquor the following facts were disclosed: yield is decreased by (a) permanganate number decreased by (a) and (c), brightness decreased by (b) while (a) and (c) increase it. The lignin content is subject with a combined effect of all three factors, while the effect on alpha-cellulose of (a) and (b) depends on the level of (c).

WHAT INFLUENCES CORROSION OF DIGESTERS?—The chemistry of white liquor was discussed in connection with "Digester Corrosion studies" by F. Loschbrandt, the director of the industry-sponsored Norwegian Pulp and Paper Research Institute. His corrosion studies on white liquor components using a polarization curve technique revealed that polysulfides can, to a certain degree, cause corrosion. However, the author admitted that this point is controversial in view of elsewhere published information.

As there are only traces of polysulphides commonly present in white liquor the question where this compound would come from was answered by the speaker in pointing to the possible formation from thiosulphate (which in itself as he found is not a corrosion agent) and sulfide resulting in polysulfide and sulfite, a well known reversible reaction. However, there again the question may be asked: Where does the thiosulfate, usually also absent in white liquor, originate from? Possibly by oxidation of sodium sulfide while the cook progresses (as had been pointed out by Mr. Borlew in the preceding paper).

However, two facts admitted by Prof. Löschbrandt would speak against the above described cause as has been pointed out during the discussion of the presented paper by this writer: (1) corrosion affects preponderantly the dome of digester and (2) occurs at the beginning of the cook. This circumstancial evidence speaks for an attack by a gas in the early stage of the cook, when thiosulphate formation and/or polysulfide could not yet have been formed in appreciable amounts (disregarding also the evidence brought out by Henri Berthier in France that no polysulfides can be found in black liquor, even from straight polysulfide cooks).

This writer feels that too much emphasis in corrosion studies has been laid on the composition of the white liquor as such and too little attention directed towards the chemical changes of the cooking liquor as the cook progresses (such as the probable evolution of H_2S gas).

Another angle which this writer thinks should be made the subject of corrosion studies is the fact that in the pre-corrosion era of digester cooking gas relief was done manually in the early beginning of the cook only, while it is at least chronologically and operationally significative that automatically controlled relief as the cook goes on replaced that practice in recent years. Whether or not corrosion is affected by gaseous compounds at the beginning of the cook seems to be an important question to be answered one way or the other by the interested parties in sponsoring some fundamental and statistical research.

COLLEGE FRIENDS AND COLLEAGUES—(Top) C. D. COATES, of The Mead Corp., gets some pointers on pulpwood storage from former University of Syracuse School of Forestry classmate ('51), T. L. GILLES, (right) of Brunswick Pulp and Paper Co. Mr. Gilles and G. M. Ference, also of Brunswick, worked together on paper, "Deterioration of Straw-Piled Pulpwood." (Bottom) college colleagues from University of Alabama, DR. KARL LAUER (left) and PROF. JAMES AYER, discuss their respective topics prior to one of pulping sessions at Chattanooga. Dr. Lauer compared pulp from tropical woods with that of Southern hardwoods. Prof. Ayer discussed Southern pine kraft deterioration in high density storage.

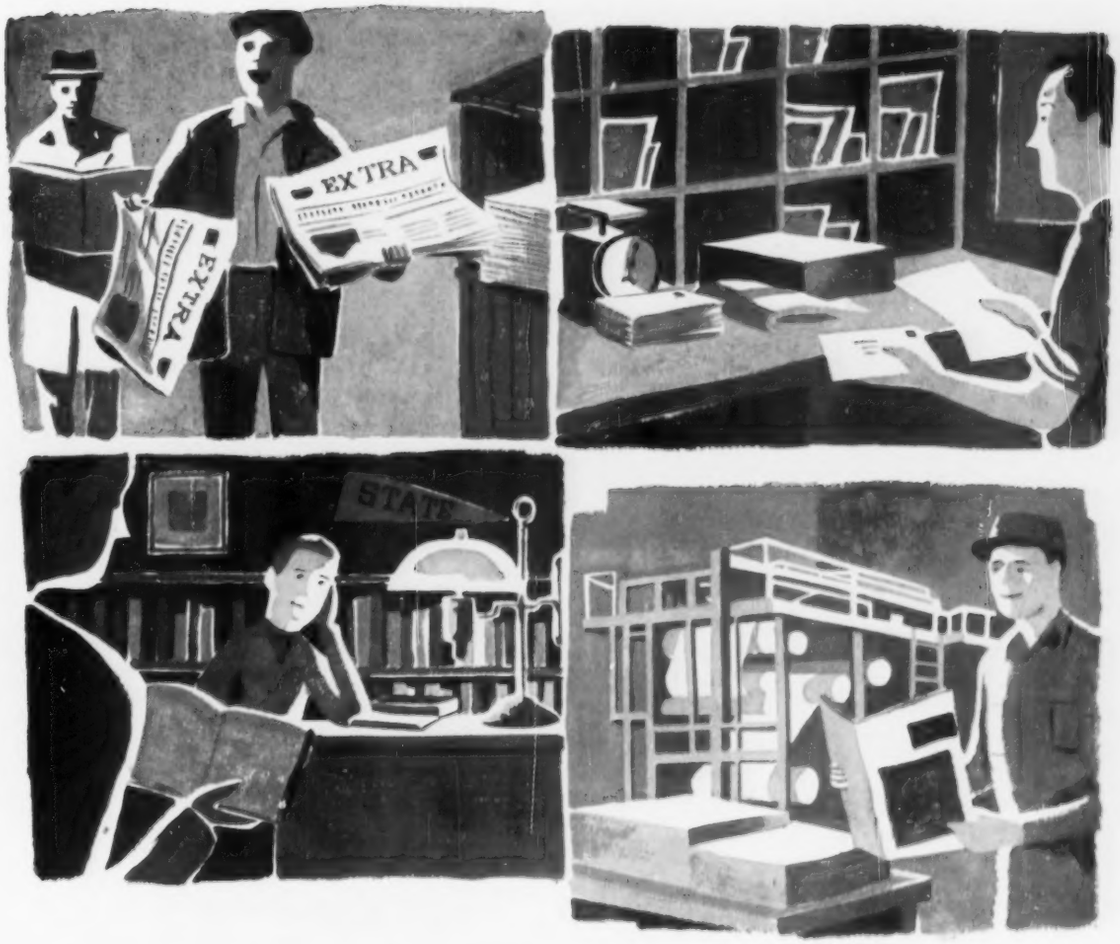
I. P. REPORT ON SUBSTITUTES FOR COOKING CHEMICALS—In a comprehensive paper on "Substitutes for Salt Cake and Sulfur in the Kraft Pulping Process," A. W. Pesch, Southern Kraft Division of International Paper Co., shared his experience on the subject and it would be a good idea to file this report carefully for use in case of emergency. He discussed such substitutes as rayon glauber's salt, oil refinery wastes including dector solutions, sodium sulfide, calcium sulfate, gypsum and soda ash, caustic soda, sodium sulfide, calcium sulfate, gypsum and presented a scheme how the economical and technicological value of substitute make-up chemicals can be best estimated. Time did not permit to convey the details of these calculations and so we will have to wait for the full publication to learn about them.

REPORT STIRS INTEREST IN TALL OIL—One of the highlights of the alkaline sessions was the paper by Arthur Pollak on "New Developments in Tall Oil," presented on behalf of the Tall Oil Division of the Pulp Chemicals Association as well as the Chemical Products Committee of TAPPI. The speaker presented figures indicating that the Alkaline Pulping Industry does not yet realize the importance of collecting all the soap skimmings which could be made available for upgrading to serve the tall oil converting industry, estimated to reach 500 million lbs. capacity by the end of 1956.

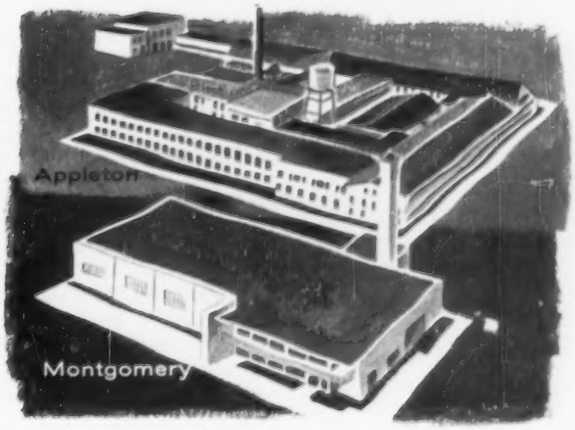
His estimate of the "inaccessible" soap skimmings ranged between one-half and one-third of the total, which includes also the available but not properly skimmed portion in the black liquor. He described the various types of distilling and refining operations, the commercially traded grades and the present and future uses in particular as a growing source of fatty acids. In view of the declining yields from the distillation of wood rosin, the tall oil rosin will fill the gap in future. As a matter of fact the tall oil rosin fraction has been officially granted the permission to call itself "rosin." In the discussion it was brought out that where hardwood and softwood are cooked together the effects on tall oil yield and quality are detrimental, increasing the unsaponifiables and lowering the saponification number.

PROGRESS IN 2-STAGE SLAKING—D. C. Gillespie and I. W. Johnson of Dorr-Oliver Inc., presented a "Progress Report on Two-Stage Slaking." The authors apply this term to the technique of slaking hot reburned lime direct from the kiln with green liquor in a large agitated tank called the primary slaker, the overflow from which proceeds by gravity to a "secondary" slaker-clarifier for further slaking and grit removal. This report was third in a series of new developments covers the experience of seven mills.

The conclusions drawn by the authors of the survey are summarized to the effect that the two stage slaking permits leveling out of kiln surges and aids in control of causticity by



Paper enlightens--informs--entertains



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HEAD TWO COMMITTEES—MALCOLM PINEO (left), Tech Director Brunswick Pulp & Paper and Chairman of Alkaline Pulping Committee, and JOHN McGOVERN (right), Parsons & Whittemore, Chairman of Semi-Chemical Pulping Committee, whose two groups put on events at Chattanooga. DAVE WETHERHORN, Southern Paperboard, was Program Chairman.

providing additional detention time for slaking; eliminates the need for additional green liquor heating and to some extent reduces the hot lime handling. This writer agrees with the reservation made by the authors that two-stage slaking is not the final answer in slaking practice although the remaining problems do not appear to be unsolvable.

MAGNETIC FLOWMETERS—Another contribution from the allied industry was by H. S. Drinker, Jr., of Foxboro Co., in "Magnetic Flowmeters," which measure volume rate of such difficult fluids like rayon slurries, paper pulp stock, rosin size, corrosive acids and even beer. The principle of operation is based on Faraday's law of electromagnetic induction. The voltage generated by the fluid or suspension through the magnetic field is detected by two small "point" electrodes made of Type 316 stainless steel or titanium and platinum (for corrosive uses).

Variations in density, turbulence, viscosity and suspended material do not affect the accuracy of performance. According to the manufacturer there are no restriction in the flow line or loss of head. The question of this writer as to possible coating of electrodes was answered to the effect that it would not affect the results of the reading for all practical purposes.

STEEL SHOT CLEANS RECOVERY BOILER—Paul West, pulp supt., Thilmany Pulp & Paper Co., reported on "New Developments in Cleaning Recovery Boilers" such as from fly ash of a micron size of less than 2 and other undesirable impurities causing pressure drop across the boiler. After numerous experiments and equipment changes his efforts culminated in a steel shot cleaning system permitting a reuse of the steel shots by elutriation.

The originally complicated system as shown in slides finally boiled down to an equipment which according to the speaker could probably be installed for $5,000.00-$10,000.00 and would result in steam saving by maintaining a low draft loss. It is based on the Delray System marketed by Diamond Power Supply and resembles the tried out Berman System used in Europe (see Svensk Papperstidn. 58 no. 18:651-656, September 30, 1955).

VACUUM WASHING—W. B. Simon's, St. Joe Paper Co., presented "The Practical Application of Statistics to Vacuum Washing." The problem arose when newly installed valveless washers were at times operating not over 25% capacity. The statistical method chosen was the one of multiple correlation which enables one to determine the effect of the various factors and their relative importance or rank.

The dependent variable was the washer throughput which was affected by the following independent variables: (a) chlorine number of the stock, (b) consistency, (c) refiner inlet pressure (ahead of the washers), (d) refiner meter loading, (e) unexplained factors. A first set of data pointed to factor (b) as the one with the highest rank. After the consistency meters were checked and serviced, consistency control improved and operations levelled out satisfactorily.

A brief but important communication from W. W. Marteny, National Container Corp., pertained to a easy constructed apparatus for the "Determination of the Filtration Constant of Semi-Chemical Pulps." It is based on the use called Ingmanson equation (see Tappi 35, no. 10:439, Oct., 1952) relating the Filtration Resistance to the specific surface of the pulp. The rugged apparatus can be speedily and easily handled by unskilled personnel and appears to this writer to become a valuable operational and research tool beyond the scope of semi-chemical pulping, as for instance in high yield kraft pulping.

It was the experience of the writer that on numerous occasions, particularly in the range of high freeness values, radical operational changes could not be recognized by the conventional tools or appeared to fall within the limits of experimental error. The apparatus of Marteny seems to fill the gap for a Canadian freeness of e.g. of 740 corresponded to 23.6 sec. filtration resistance, while one of 727 increased over double, reading as much as to 50 sec. and seems to maintain its sensitivity also in the lower range where e.g. a 338 C.F. resulted in 457 sec. F.R.

PANDIA COOKER IN JAPAN—The last paper presented, by R. G. Goodwin of Pandia, Inc., described the Kanzaki Continuous Pulp Mill (Japan). The mill, producing fine paper grades, recently switched part of production from sulfite to a bleachable grade of hardwood in continuous operation. The furnish supplied now is up to 35% hardwood (30% beech, 30% oak and 40% other species) the rest softwood sulfite. The unbleached pulp has a Roe chlorine number of 14-15, and the pulp brightness following a 3-stage bleach is 83-84%.

The luncheon speaker was Brig. Gen. Herbert D. Vogel, a West Point graduate, holder of several domestic engineering degrees as well as a Ph.D. from one of the top European schools, the German Technische Hochschule in Berlin-Charlottenburg. As present Chairman of the Tennessee Valley Authority he gave an impressive picture of the functions of this body, particularly its achievements in reforestation. He stressed the value of cooperation between public authorities and private enterprise for the good of the country.

The conference was appropriately rounded out by a conducted tour through the modern and spacious newsprint (kraft and groundwood) mill of Bowaters' Southern Paper Corp., which included the revolutionary water logging operation. The hospitable management made this tour instructive and pleasant.

Ed Hopper is Consultant with J. E. Pritchard & Co.

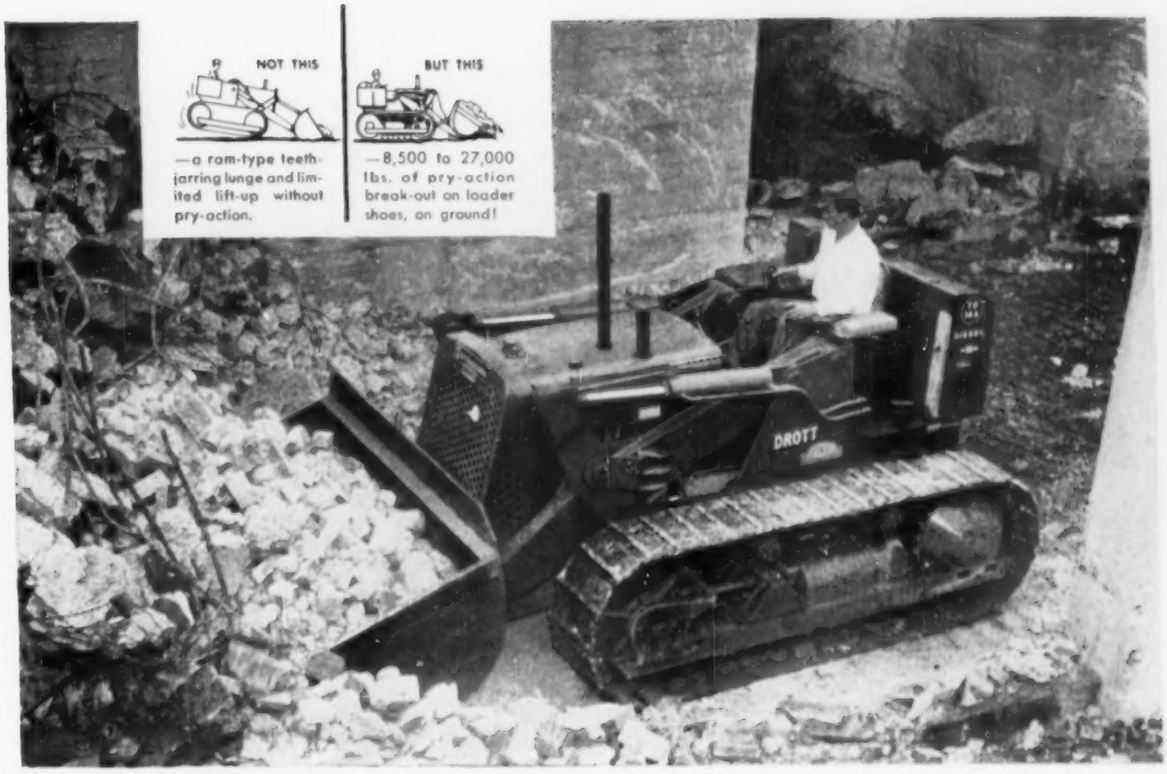
Edward W. Hopper, chemical engineer and corrosion specialist, widely known for his work in kraft pulp mill corrosion studies, is now consultant for J. E. Pritchard & Co., Engineers-Constructors, 4625 Roanoke Parkway, Kansas City, Mo.

Mr. Hopper maintains headquarters at Pritchard & Co.'s district office, 905 Union Trust Bldg., Pittsburgh 19, Pa. (Phone: Express 1-616.)

In the April 1955 issue of PULP & PAPER, a special article by Mr. Hopper, "Why Scrap Steel Kraft Digesters?", told how their life can be extended by new overlays.

Mr. Hopper also is doing independent consulting in the fields of chemical, metallurgical and corrosion engineering. His activities are aimed at giving improved engineering and construction service to this industry.

Mr. Hopper attended Pratt Institute and Columbia University, where he was assistant to Dr. Colin G. Fink and Lincoln T. Work. With Dr. Fink, he developed the first continuous electrolytic strip tin plating process. He installed the first electrolytic tin operation at Crucible Steel Co. of America's Midland plant.



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THIS PULPWOOD PANORAMA taken from control tower which rises 50 ft. above woodyard at Rome Kraft Co. shows various methods mill gets is wood. Trailers, trucks (right of center) await scaler. American DiesElectric crane (left of center) with Owen pulpwood grapple unloads trailer. At lower right is company-designed truck unloader described in story. Photo by PULP & PAPER.

Roads to Rome Now Carry Pulpwood

New ideas in wood storage handling feature new mill in North Georgia—logs peeled before storage

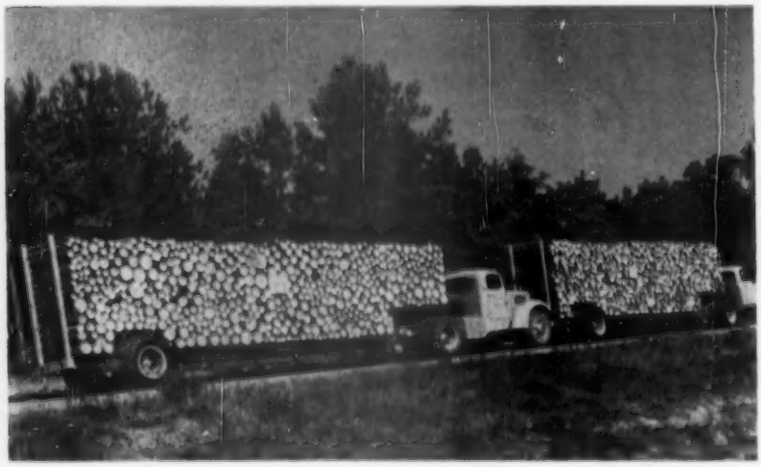
• The flow of some 1300 cords of pulpwood daily to Rome Kraft Co. from hundreds of producers in 4 states is coordinated by some 20-odd dealers. Pulpwood procurement is entirely a dealer operation as at present Rome Kraft doesn't harvest any pulpwood.

Pulpwood dealers are assigned areas from Birmingham, Ala., to eastern Tennessee, and west South Carolina and northwest Georgia.

North Georgia Timberland Co., a Rome Kraft subsidiary, controls over 300,000 acres of unproductive land, mostly run-down farms and eroded areas which have formerly been a liability to the people of this region. On it they have set out seedling pine trees to bring this lost land back into productive value for the South. Some harvesting operations on these lands are expected to begin in five years.

Rome Kraft's wood division also has a staff of trained foresters in Georgia and neighboring states to assist landowners in growing, harvesting and selling forest products.

Heading up woodland operations are N. R. Harding, woodlands manager, H. B. Mathias, procurement supervisor, C. A. Rodgers, assistant procurement supervisor, K. C. Korstian, chief forester and Ralph Dobberstein, assistant chief forester.



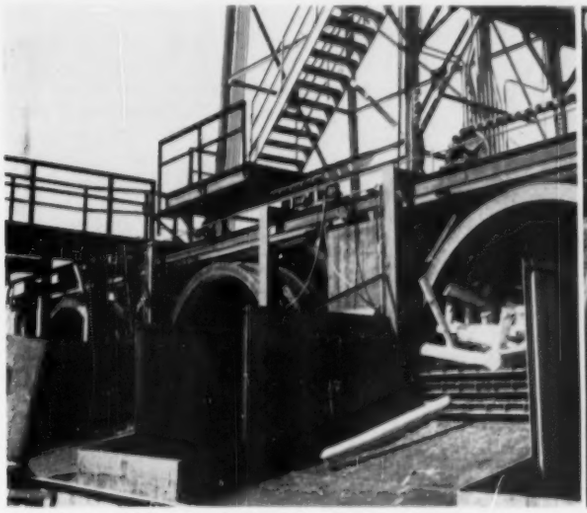
40% OF TRUCKED WOOD COMES BY TRAILER to Rome Kraft Co. These trailers are hauling pulpwood from concentration yard at Ludville, some 60 mi. northeast of Rome. Each can hold about 5 truckloads.

EXPERIMENTS WITH CONCENTRATION YARD—Pulpwood arrives at Rome Kraft by rail (80%) and by truck in 5 ft. 3 in. lengths. Unusual is that 40% of trucked wood comes by trailer. The company has an experimental concentration yard some 60 miles northwest of Rome near Lud-

Elsewhere in this issue is PULP & PAPER'S own complete story of the new Rome Kraft pulp and paper mill.

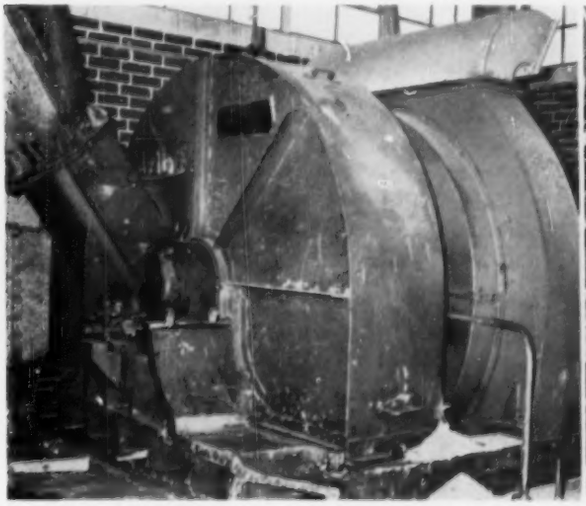
UNLOADING A TRAILER—This rail mounted American Dies Electric crane unloads trailer load of pulpwood at Rome Kraft with Owen pulpwood grapple.

CONTROL TOWER RISING 50 FT. ABOVE WOODYARD is where operators regulate all log conveyors, barking drums, sorting belt to chippers, conveyor system and wood reclaiming.

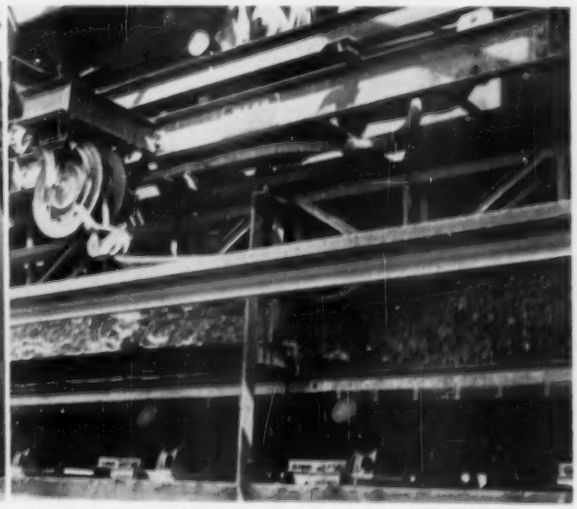


WHERE WOOD IS BARKED—Interesting features of these 3 Fibre Making Processes drum barkers are that each has an air-controlled sliding gate to permit operation without shutting down woodyard operations.

LOGS ARE EJECTED from barkers onto this 6-ft.-wide Goodyear rubber belt, with reversible flowage to either chippers or to stacker conveyor.



WOOD IS CHIPPED, fed from 60 in. wide Goodyear belt into one of two left-hand D. J. Murray 10-knife chippers with 21.5 in. knives. Each chipper is powered by a 600 hp Electric Machinery motor rated as 400 rpm.



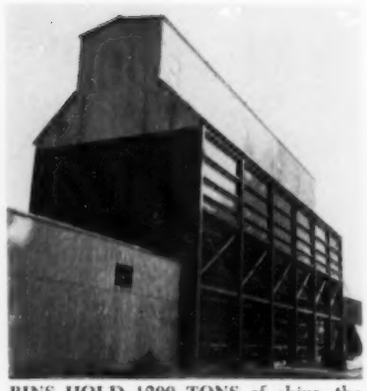
AN UNUSUAL OPERATION at Rome, Ga.—chips are pulled from bottom of chip bins by 3 helical screws. As chips start toward digesters they are automatically weighed by Merrick Weightometer, controlled from room at top of digester house.

ville, Ga. Here truck loads are transferred to trailers with capacity of about 5 truck loads for the longer hauls to the mill.

Arriving at the woodyard at Rome, rail loads and trucks are unloaded onto one of three conveyors 309 ft. long. For efficiency of operations, these conveyors are not inclined but discharge into inclined conveyors which feed the drum barkers.

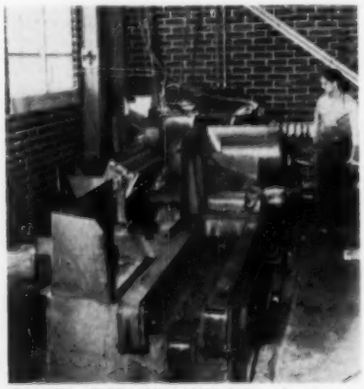
A rail-mounted American DiesElectric crane with an Owen pulpwood grapple is one method of unloading railcars, trucks and trailers. Company engineers have also developed a unique truck unloader, which can handle trucks and trailers up to about 32 ft. long. It consists of a 50-ft. steel tower with a 35-ft. boom powered by a 30 hp high-starting-torque motor. A sling, attached to the boom, is lowered around the load of wood and as the boom raises, the logs are lifted and fed uniformly onto the conveyor. A truck can be unloaded in about three minutes.

HOW WOOD IS CONVEYED— Worthy of special mention to woodyard management is the type of chain and construction of the conveyors in the yard. This is a 998 drop-forge, heat treated chain with ultimate strength of 130,000 lbs. The chain is snuggled in between two carrier run supports and so designed that it can't be struck by a direct blow except by a log 4 in. dia. or smaller. The conveyor apron, too, is of interest, being of manganese. The pounding of logs is said to be an advantage on this rugged metal, which can't be pounded out of shape.



BINS HOLD 1200 TONS of chips, the equivalent of 14 digesters. A traveling tripper distributes chips. Ingalls Steel Co. fabricated these bins.

Two of the inclined drum-feed conveyors are 116 ft. long, and one is 112 ft. The three chain-suspended double unit Fibre Making Processes Inc. barking drums are 12 ft. by 45 ft. and of special interest are the air-controlled discharge gates on each, permitting drum operating when subsequent processes are shut down. Barked logs are ejected onto a reversible 6-ft. wide Goodyear Rubber sorting belt, 100 ft. long, with a capacity of about 90 cords an hour and arranged for conveying to either chippers or stacker feed conveyors. At this stage too, oversize logs are removed from the sorting belt, split on a company-designed log splitter with a



CHIEF DISADVANTAGE of storing peeled wood is "rough" effect it has on chipper knives. After some 6 to 8 hours, knives are re-sharpened in this Hanchett knife grinder.

In every size, Link-Belt Speeder offers

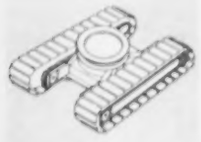
more speed, stamina, power, work-time!

MOUNTAINOUS PILE OF PULPWOOD disappears fast with K-365 rig on the job. Operator handles grapple with ease from Speed-o-Matic control panel—has sure, safe "feel" of the load all the way.

More speed—

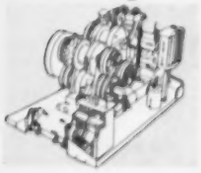
Speed-o-Matic, the true power-hydraulic control—smooth, positive response—perfect "feel" for speed with accuracy. Engineered to consider the human factor, greatly reduces operator fatigue.

More stamina—



A Link-Belt Speeder withstands continuous heavy-duty, high-speed operation. For proof, compare similar sized rigs with and without counterweights. Link-Belt Speeders have more "live weight", more strength built into every component.

More power—



Get more line pull, more digging power, lower fuel costs. Link-Belt Speeder design calls for precision-machining, anti-friction bearings and splined shafts at every point that helps transmit *rated hp* into *usable* hp.

More work-time—

A bigger percentage of shift is spent in actual "work-time." By minimizing operator fatigue, Speed-o-Matic boosts output up to 25%; also eliminates frequent on-the-job clutch adjustments and maintenance.

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because Link-Belt Speeder is *years ahead* of the shovel-crane industry. Only Link-Belt Speeder offers you Speed-o-Matic's true power hydraulic control and so many other outstanding design and construction advantages. For facts on every machine in the ½ to 3-yard, 10 to 60-ton work range, contact your Link-Belt Speeder distributor. Link-Belt Speeder Corp., Cedar Rapids, Ia.

Visit your Link-Belt Speeder distributor and see these great machines first hand. A demonstration can be arranged at your convenience to prove that Link-Belt Speeder gives you most for your money.

LINK-BELT SPEEDER

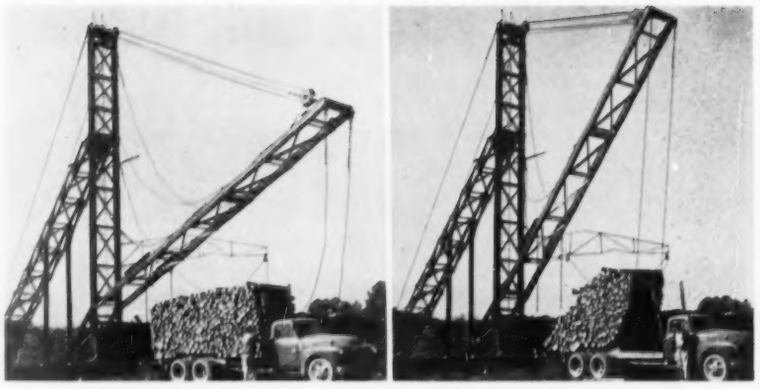
Builders of a complete line of crawler and rubber-tired shovel-cranes

13.710

hydraulic power unit, and returned to the system.

PEELED LOGS STORED—Rare to the sight of pulpwood managers is the storage of peeled logs, but at Rome Kraft this is common. According to John C. Reamer, woodyard superintendent, twofold advantages are that the wood keeps better and no chance is afforded insects to work under the bark undetected. The bark is also in the best possible condition for use as fuel and definitely has a higher fuel value. Bark is said to provide 15% of steam requirements at Rome Kraft, and in effect the company recovers about $1.50 per unit of purchased wood as fuel.

The Jervis B. Webb stacker is one of the largest of its kind in the U.S. The 200-ft. long inclined chain conveyor stacker feed moves the logs at 130 fpm and has a capacity of 50 cords an hour. The stacker is 318 ft. long and rising to a height of 75.6 ft. is capable of 65 ft. high piling of some 15,000 units, each about 20,000 U.S. cords, in two separate storage piles for fire protection. The stacker travels on a 570-ft. long track in a 172° arc. Five 40-ft. high ground-control monitors protect each wood pile.



SPECIAL TRUCK UNLOADER was originated at Georgia Kraft Co. (formerly Macon Kraft Co.), designed by company engineers there. Tower, 50 ft. high, lowers 35-ft. boom with sling around pulpwood load (left) and as boom raises (right), logs are fed uniformly onto conveyor.

Logs are reclaimed and put into the flume system by a Baldwin-Lima crane with an Owen RC-60 pulpwood grapple. This flume system feeds a 130 ft. long, 60 cord capacity, 90 fpm conveyor.

A closed circuit bark conveyor picks up bark under the drum barkers from a 12 in. deep hopper. This conveyor is 58 ft. long, can move 15 tons of bark an hour at 42 fpm, and uses 468 drop forge chain. It discharges onto 36 in. belt 303 ft. long, which moves at 300 fpm with a capacity of 45 tons an hour.

Ahead of the chippers are two 30 in. dia. by 36 in. wide Dings electro-pulley magnets. Two D. J. Murray left-hand 10-knife chippers with 21.5 in. knives can chip up to 19 in. dia. logs. Each chipper is powered by a 600 hp Electric Machinery motor, at 400 rpm. A 42 in. by 60 in. long Dings electro-pulley magnet is set to catch tramp metal at the head end of the chip conveyor.

After chipping, chips flow along a 60 in. wide rubber belt, 66 ft. long, at

350 fpm with a capacity of 30,000 cu. ft. and discharge onto a 48 in. inclined belt 200 ft. long to the top of the chip storage bins. Fabricated by Ingalls Steel Co., these bins can hold about 1200 tons of chips or the equivalent of 22 digesters. A traveling tripper distributes the chips across the bins.

A NEW CHIP UNLOADER—Unique in U.S. operations is the unloading of chips from the bottom of the bins by three traveling helical screws onto the 48 in. conveyor to the top of the digester house. As the chips begin their 370 ft. long journey, they are weighed and recorded by a Merrick Weightometer with controls in the digester control room. This conveyor segment moves 24,000 cu. ft. of chips at 350 fpm and feeds a Webb 48 in. wide belt shuttle conveyor, 68 ft. long, which discharges the chips into individual digester chutes.

All conveyor equipment, some 5,000 ft., was integrated by Jervis B. Webb Co. into a striking straight-line flow layout of materials handling, including pulpwood, chips, bark, coal and finished rolls. Steel fabrication work on stacker, conveyors, bark, chip storage was effected by Ingalls Steel Co., Birmingham, Ala.

In the woodyard at Rome Kraft all logs conveyors, barking drums, sorting belt to chippers and stacker conveyor system, as well as wood reclaiming are controlled by one operator in a tower which rises 50 ft. above the yard.

WOOD FOR ROME—THEIR JOB—N. R. HARDING (left) is Woodlands Mgr., and JOHN R. REAMER (right), is Woodyard Supervisor, Rome Kraft Co. This woods operations story is their concern. For other officials and key men at Rome, see story of the new mill, elsewhere in this issue . . .

Beetles Still Danger Despite A Decline

Bark beetles, Southern pine beetles and Ips engravers continue to take a heavy toll in pine trees in the south, according to a recent release by Southeastern Forest Experiment Station.

Although severity of the insect outbreaks is on the decline, the bulletin warns that with the onset of dry fall weather, bark beetle activity may be expected to increase. Forest landowners are warned to be on the alert for developing infestations, especially in areas infected last year and in pine areas affected by recent hurricanes.

Recent surveys show that Ips engravers have caused considerable pine death over a 4,000 square mile area in the Carolinas. According to the bulletin, the insect is still a considerable problem in some areas even though it appears to be on the decline.

P & P Industry Claims Top Youth Education

The Southern pulp and paper industry claims the largest youth education program in forestry in the U. S. with 8,500 youths attending forestry camps.

In its 10th year and sponsored for the most part by SPCA mills with a few non-member mills paying costs of the camps, the program now has nine camps located in Alabama, Arkansas, Florida, Georgia, Louisiana, Missippi, North Carolina, Tennessee and Virginia. This year a total of 40 mills participated in the camping program.

WHEN FOREST SERVICE TOLD OF U. S. TIMBER FUTURE—DR. RICHARD E. McARDLE (left), U. S. Chief Forester, displays big 6-lb. full report, first since 1945, on U. S. timber resources and outlook. He had biggest audience of foresters ever assembled, the Society of American Foresters convention in Portland, Ore. Other speakers and participants were: (l to r) HENRY CLEPPER, Exec. Secy., SAF, Washington, D. C.; E. L. DEMMON, Southeastern Forest Experiment Station, Asheville, N. C.; DR. HENRY SCHMITZ, Pres., Univ. of Wash., Seattle; DEWITT NELSON, Dept. of Natural Resources, Sacramento, Calif.; E. P. STAMM, Crown Zellerbach Corp., Portland, Ore.; A. W. GREELEY, USFS, Juneau, Alaska.

What Are Facts About U.S. Forests?

Industry aided in appraisal but USFS conclusions are all its own—basic data is still lacking

Continued from page 69

a farm crop. Another less publicized talk, by Woodlands Mgr. E. S. Hurd of Consolidated Water Power & Paper Co., revealed 125,000,000 trees will be planted in the Lake States and Northeast in the next decade.

Mr. Hurd, in his APA annual report published in PULP & PAPER's Pulpwood Annual (July, 1955), said the South leads all other sections in tree planting and that 9,000,000 acres have been planted in the nation. Every year since 1952, the pulp and paper industry alone has planted 53,000,000 trees annually on company lands, and should maintain this pace through 1962.

A pertinent point by another speaker at Portland, Ed Stamm, Crown Zellerbach v.p. and logging mgr., was that over one billion ft. of timber is lost every year in federal forests of the Douglas fir region because of lack of access roads. He said private industry spends over $30,000,000 annually for forest roads; the government figure for all national forests has reached only $24,000,000 in the past two years.

HIGHLIGHTS OF MCARDLE's REPORT—The USFS says:

That in A.D. 2,000, the U.S. population will increase 67% to 275,000,000 and a "lower level" estimate is that industrial wood demand will be 67% greater, too. But annual consumption per capita will decline from 65 to 62 cu. ft.

An "upper level" estimate is for a 105% increase and a per capita figure zooming up to 76 cu. ft. Sawtimber cut required would increase from 49 billion bd. ft. in 1952 to either 69 or 95 billion bd. ft.

The U.S.A. must rely on domestic timber. It controls 8% of the world forests, 15% of timber under exploitation. It has 4 acres of timber per capita to Russia's 9, Canada's 66. U.S. has 20% of world's soft timber, but only 14% of soft timber acreage. Canada has more area but half the volume. Over half the world's softwood is in the Soviet bloc. U.S. imports from Canada probably will increase in pulpwood paper or pulp, said the USFS.

It is no longer clearly apparent there is ample forest land, according to USFS. Farms, highways, power lines and urban expansion are reducing it. Further significant reductions should be avoided.

Of timber cut in 1952, one of every 4 cu. ft. was not used; but for cut pulpwood, only 4% was unused. Best use was in the North (82%). The West (74%) and South (72%) were poorer. About 75% of total timber cut was for sawlogs; 16% for pulpwood. In all areas, the pulpwood picture, when viewed separately, was much better than for lumber. Preferred species are being replaced in many areas, but USFS noted that technological ad-

OWNERSHIP OF COMMERCIAL FOREST LAND

CONTINENTAL U.S.A.

(In Millions of Acres-Rounded Numbers)

	Federal-owned or managed	State, County and Municipal	Private
1952	99 - 20%	27 - 6%	358 - 74%
1944	89 - 19%	27 - 6%	345 - 75%
1929	88 - 18%	11 - 2%	396 - 80%

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5 HP—20 POUNDS

Never before has there been a chain saw with so much power per pound as the new Homelite Model 5-20. It has 5 big horsepower for faster cutting . . . a light, light 20 pounds for easy operation. What's more, it is the only chain saw that gives you a choice of attachments to do many different cutting chores easier.

The new Homelite Model 5-20 is precision built for quick starting, dependable performance, and low, low maintenance. Cuts in any position . . . it saves both time and money . . . brings bigger profits to woodcutting or clearing operations. Write for complete details or see your Homelite dealer.

See your dealer for details on the Homelite TIME PAYMENT PLAN

Packed with power, the new Homelite Model 5-20 Chain Saw brings down big trees six feet in diameter, cuts through 20" trees in 20 seconds without forcing or jamming. Anyone can operate it . . . no experience necessary.

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Interchangeable Blades add versatility to the new Homelite 5-20 Chain Saw. For felling, bucking, limbing or plunge cutting, there's a hard track blade for every requirement. Straight blades available from 14" to 60", bow saws 14" and 18".

Bucking is easier on man and saw when a Homelite 5-20 goes to work. Takes less time than ever before. The 5-20 stands up under the grind on any job . . . job after job.

Underbucking takes less effort and is just as simple as bucking. The 5-20 is easy to handle upside down or in any position . . . and there's no loss of power.

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vances will offset the decline in quality.

WHERE MUST MORE TIMBER COME FROM?—Best ways to add to timber supply, says Dr. McArdle, will be to (1) salvage more of the 10 billion bd. ft. dying annually, (2) achieve more sawtimber growth potential, (3) improve stocking of commercial lands, one-fourth being described as medium or poorly stocked, and (4) more promptly restock cutover lands. He rated these as more feasible solutions than to draw upon Alaskan timber or to count on any increased Canadian imports.

The heart of the U.S. problem, says the USFS, lies with 3.4 million farmers and 1.1 million other private owners, who own less than 100 acres each. Their lands are classed as having the poorest cutover conditions.

INDUSTRY TOOK PART — BUT NOT IN CONCLUSIONS—Dr. McArdle told his Portland listeners that many industries, state forestry departments and other federal agencies assisted in preparing the "Timber Resource Review." He said USFS had about $500,000 worth of assistance from 149 different sources, "including many pulp and paper companies."

However, these industries and agencies only assisted in providing basic data. The interpretations were made by the U.S. Forest Service alone, and USFS must take full responsibility for them.

The USFS setup a national group, to provide cooperation and guidance, which convened in 1952. This group included American Paper & Pulp Assn., American Pulpwood Assn., National Lumber Manufacturers Assn., Association of American Foresters, Society of American Foresters, several unions and others.

These and their respective subsidiaries agreed upon USFS's stated objectives of determining timber volume and timber growth and subsequently participated in the field with the forest service representatives. Industry's objective was to develop practical bases and procedures for gathering meaningful forest data. This involved trying to correct some conclusions that have been dispassionately referred to as "fuzzy."

INDUSTRY SOUGHT "REALISTIC" CLASSIFICATIONS—An example of this was industry's attempt to develop a realistic attitude concerning classifications of forest stocking. Field foresters contended that 40% stocking for a 10-year-old stand can normally be expected to be fully stocked when it becomes an 80-year stand.

U.S.A. COMMERCIAL FORESTS

GROWTH AND REMOVAL

(By U.S. Forest Service)

Sawtimber (In Millions of Bd. Ft.)

	Net Annual Growth*	Cut for Use	Balance
1952 (TRR)	47,269	48,754	— 1,485
1944	31,066	49,658	—18,592
1929	11,731	54,641	—42,910

All Timber (In Millions of Cu. Ft.)

1952	14,211	10,744	+ 3,467
1944	11,891	12,182	— 291
1929	8,912	14,495	—5,583

*** Mortality (fire, insects, disease, windthrow) already deducted. For all timber, mortality was 3,389,000,000 cu.ft. in 1952, about twice what was reported in 1944 and 1929.**

Regarding TRR and the assumptions by which conclusions were developed, an eminent West Coast forester says, "they have ignored the trend of understocked stands toward normality as they approach rotation age." He points out that all the answers concerning growth projection are not yet known, but those made 25 years ago are found to be ultra-conservative.

FUNDAMENTAL DATA STILL LACKING—Disappointment has been voiced that the effort consumed in developing TRR wasn't applied in gathering fundamental forest data which are still lacking. Even to this day about 40 million acres of commercial forest land in U. S. (chiefly in the Rocky Mt. region) have not been subjected to a forest survey, although the authorizing act (McSweeney-McNary Bill) has been in effect nearly 30 years.

VOLUMES ON COMMERCIAL FOREST LANDS

CONTINENTAL U.S.A.

(By U.S. Forest Service)

Sawtimber (Bd. Ft.)

1952	1,967,789,000,000
1944	1,600,972,000,000
1929	1,668,000,000,000

All Timber (Cu. Ft.)

1952	498,439,000,000
1944	470,045,000,000
1929	486,719,000,000

TRR (1952) shows the volumes in Alaska: Sawtimber, 180,000,000,000 Bd. Ft.; All Timber, 32,000,000,000 Cu. Ft.

Although few of the suggestions of private foresters show up in the present report, USFS yielded on some points. It gave up on, and dropped, sections of the productivity formulation for the Pacific Coast states. Incidentally, private foresters who were concerned report they were unable to make sense of the "productivity formula."

WHAT MANY FORESTERS OBJECT TO—Interviews with foresters, including forest service personnel, on TRR—released in October for a three-month review—readily developed the following objections:

(1) The bleak, depressive interpretation resulting from the manipulation of current data.

The 1945 re-appraisal (by USFS) indicated annual **gross** sawtimber growth at 35.3 billion bd. ft. Present **net** growth (after deducting for mortality), according to TRR, is 47.3 billion feet per year. But instead of heralding this as a whopping growth increase, the 1945 data were (via hindsight) revised upwards about 23% to 43.4 billion feet per year—indicating that current growth rate, on standards of today's utilization, is but 9% greater than it was 10 years ago.

A similar technique was utilized for volume. What was indicated as 1,601 billion bd. ft. of timber by the 1945

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President Theodore Roosevelt Visits Panama Canal: This Bucyrus-Erie shovel, one of 77 used on the Big Ditch, was included in his 1908 inspection tour.

The 22-B, shown here loading logs, has a world-wide reputation for outstanding performance. Another popular favorite in the woods is the 25-ton 22-B Transit Crane, carrier-mounted to give you rubber-tired mobility.

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re-appraisal, was adjusted for TRR to show the volume as of ten years ago to be 2,006 billion. TRR estimates current volume at 1,968 billion. Although this volume estimate, made according to present utilization standards, is 23% more than the official 1945 data, the latter were adjusted (by hindsight again) upwards and somehow show a continued decline in timber volume, rather than an increase.

That the conclusions and assumptions may appear somewhat slanted seems to be objectively recognized by Dr. McArdle who stated, in his summary presentation, "This is a factual report, plus Forest Service interpretation of what those facts mean."

WHAT WAS LEFT UNSAID – (2) TRR indicates 115 million acres, about ⅛ of total commercial forest area, are less than 40% stocked. This includes 42 million acres of less than 10% stocking. "Thus," according to Mr. McArdle, "one-fourth of the forest land is not growing and will not grow timber to anywhere near the productive capacity of the land unless stocking is greatly improved."

It was not pointed out, however, that most of these "10%" lands are growing more bd. ft. per acre than the 100% stocked overmature government lands which produce nothing.

Industry foresters are questioning the fairness and validity of judging forest land productivity by "stocking."

WHAT ABOUT WASTE ON FEDERAL LANDS?–(3) Unused logging and plant residues were cited as embracing "the greatest opportunity . . . for supplementing timber supplies by closer utilization." Although, you will not find it in TRR, foresters in the know regarding plants and woods conditions report this "key for stretching the timber supply" is insignificant compared to "the billions of feet wasting away on government-owned timber lands."

WHAT ABOUT NEEDED GROWTH ON U.S. LANDS?–(4) Dr. McArdle reports that TRR estimates needed growth for A.D. 2000 to be 90 to 154% above 1952 levels for the Eastern softwoods, 15 to 52% for Eastern hardwoods, and 121 to 194% for Western species, depending on whether needs are geared to lower or upper demand estimates. In spite of this recognition of needed growth, USFS (largest holder of timber in the nation) is generally credited–particularly in the West–as an out-front leader in doing too little to increase growth on its timber holdings.

FORESTERS SEE OTHER INCONSISTENCIES–(5) In contradiction to earlier national appraisals, Dr. McArdle reported TRR indicates "the nation has no excess of timber lands." He stated in his Portland, Ore., speech, "further significant reductions in the acreage of land devoted to growing trees should, in general, be avoided or should be made with full realization that such withdrawals may adversely affect future timber supplies."

Total forest land, according to 1945 re-appraisal, was 623.8 million acres, 461 million acres classified as commercial forest land. TRR shows these to now be 664 and 488 million, respectively–an increase of 27 million acres classified as commercial forest land during the intervening ten years.

Some well informed foresters ask, "How can this be?"–more forest land, more timber and fuller utilization than ten years ago when the 1945 re-appraisal stated "the nation has plenty of forest land . . . the potential productivity of this vast domain is great –enough eventually to fill domestic needs generously, provide for national emergencies, and export to a world under-supplied with timber, as it is with food."

This, in TRR, is explained away by pointing out that the 1945 report was based on an under-estimated projected population.

Incidentally, Stanford Research Institute's authoritative report "America's Demand for Wood 1929-1975" indicates the wood need 20 years from now to be 11.54 billion cu. ft. as against TRR's estimated 14.29 to 15.79 billion for the same year (1975), an overage of 23.8% and 36.8%, respectively.

FOREST AREA

CONTINENTAL U.S.A.

(By U.S. Forest Service)

Total Forest Land	Acres
1952 (TRR)	647,686,000
1944 (Forest Reappraisal)	623,828,000
1929 (Copeland Report)	615,000,000
Commercial Forest Land	
1952 (TRR)	484,430,000
1944 (Forest Reappraisal)	461,044,000
1929 (Copeland Report)	494,898,000

TRR reports 136,508,000 acres of forest land in Alaska: Coastal--16,508,000 acres; Interior--120,000,000. Coastal Alaska has 4 million acres commercial forest, and interior, 40 million.

"No Decision Bout" Enlivens Foresters Meet

FOR–STUART MOIR (left), Forest Counsel, Western Forestry & Conservation Association. He took the rostrum at the Portland, Ore., convention to defend continuance of the Private Forestry Division of the Society of American Foresters.

AGAINST–EARL PORTER (right), who heads all woodlands operations east of the Mississippi for Southern Kraft Division, International Paper Co. He was against abolishing the Society of American Foresters' Private Forestry Division.

FOR:

Mr. Moir argued that the problems of private foresters were still different enough to require specialized discussion and attention. Private foresters comprise better than 42% of SAF membership, he said.

"The Division should serve as an articulate group within the Society, to express viewpoints of private foresters", said Mr. Moir. "The need is more apparent than in 1946, when the division was formed. We need a liaison between the private foresters and the Society's council."

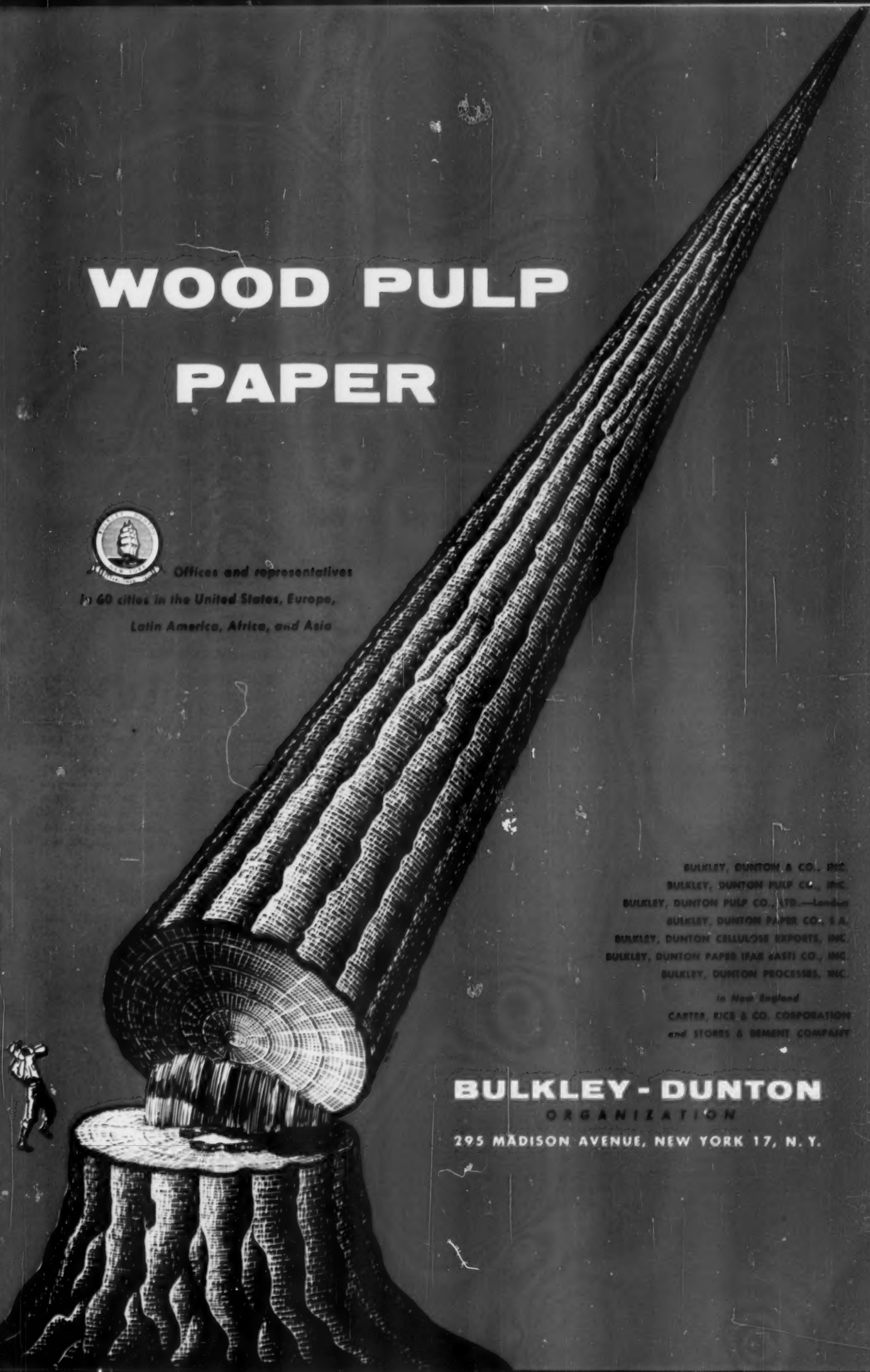
Stuart Moir, forest counsel, Western Forestry and Conservation Assn., urged continuance of the division.

AGAINST:

"There is no difference between the silvicultural elements of good forest management as practiced by public and private foresters," argued Mr. Porter. "Only the management and economic objectives may differ. Therefore all private forestry problems can be discussed by the society's division of economics, silviculture and management.

"Some years ago, when private forestry was making its first strides, there may have been justification for drawing off to one side," continued Mr. Porter, "Now, with private foresters outnumbering public foresters and with common problems facing all foresters, there no longer is a need for setting up a strictly vocational group."

WOOD PULP
PAPER



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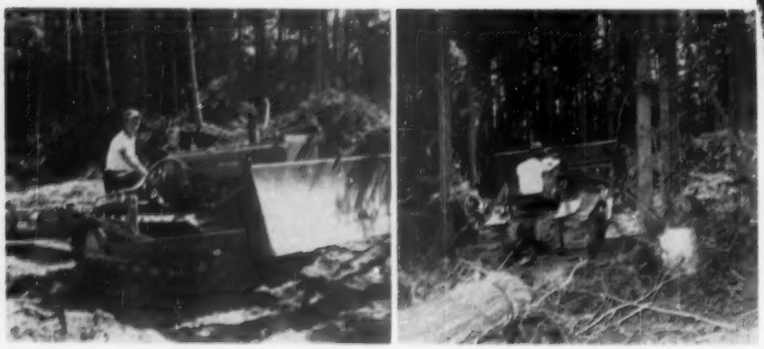

PULPWOODER CLINT HERZOG is operating a John Deere "40" tractor for logging and land clearing, in Western Washington state, aided by the Holt angle dozer blade attached to John Deere hydraulic lift. Gearmatic winch and 75 ft. of drumline are also attached. Side and rear views of tractor and winch, hauling a big log, are shown.

How Tiny Gas Crawlers are Used in West

• A new trend in the Pacific Northwest is use of small gasoline-powered crawlers for pulpwood logging. These small machines, first developed for farm use, have been adapted to skidding, loading, roadbuilding and log-moving around landings.

Powerful performers considering their weight and size, horsepower ratings are 25, belt, and 23, drawbar. A 2-cylinder gas engine furnishes power, via a standard transmission with four speeds forward and one reverse.

An unofficial count by PULP & PAPER puts the number of one type of light gas crawler in use in the Puget Sound region of Washington and British Columbia at well over 100 units. This is the John Deere "40," introduced two years ago.

The John Deere "40" is capable of skidding fair-sized sawlogs. Its maneuverability and small size qualify it for an important role in the forest management picture of the future. This tractor appears well-suited to thinning young growth, for pre-logging of sawtimber stands and salvage of pulpwood. It can be used for light road construction and maintenance, construction of fire trails and tree planting.

HOW ONE OPERATOR USES A "40"—A PULP & PAPER editor observed John Deere "40s" in operation on Washington's Olympic Peninsula, an early-logged area which is now a major source of pulpwood from young growth. Many shows considered economically inoperable for larger equipment are now being logged with these crawlers, usually in crews of one or two.

From the Clint Herzog operation on the north shore of the peninsula a person can look across the Straits of Juan de Fuca to Victoria, B. C. Here Mr. Herzog employs a "40" equipped with hydraulic-lift reinforced Holt angle dozer blade and Gearmatic Model BA winch with 75 ft. of Yellow Strand ⅝ in. steel core drumline. His machine has 14 in. pads with hard-surfaced grouser bars.

Mr. Herzog skids his logs to the landing in tree lengths, then bucks them into 4-ft. lengths for pulpwood. He has handled logs scaling 380 bd. ft. To load, he backs his 2½-ton flat bed truck into a shallow pit and pushes the logs onto it with the tractor dozer blade.

Extra weight of frontend attachments increases traction and lifting ability. Logging arches are also used. Canopies have been installed on some "40s."

The tiny units have performed creditably on steep ground and soft boggy land. Skidding distances up to 1000 ft. appear economically feasible.

Southeastern Opportunities In Wood Waste

The 180 million cu. ft. of slabs, sawdust, shavings, veneer waste and other residue produced by North Carolina sawmills and wood-using plants each year is enough to supply all pulpmills of North Carolina and Virginia, too, says the USFS Experiment Station at Asheville, N. C. At present most of it is burned or left to rot. Major bar to its profitable use is the fact that it is scattered among 20,000 locations throughout the state.

To promote utilization of this raw material, the N. C. Dept. of Conservation and Development has issued an illustrated booklet describing the total amount, the available amount, and where it is. The report is by Walton R. Smith, George Englerth, and Michael Taras, utilization staff members of the Southeastern Forest Experiment Station, FS, USDA. Free copies are available from U. S. Forest Service, Box 2570, Asheville, N. C., or from the N. C. Dept. of Conservation and Development, Raleigh, N. C.

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ALLIS-CHALMERS MFG. CO. pictorially presents its new HD-11G tractor shovel in catalog Ms-460, available from the construction machinery div., Tractor Group, Allis-Chalmers, Milwaukee, Wis.

Can Move 6 Freight Cars

New Whiting heavy duty trackmobile at a demonstration for over 200 business and civic leaders and editors in Chicago. Left to right: Stevens H. Hammond, Chairman of the Board; Robert Hammond, Mgr. Chicago District Office; and T. C. Hammond, Vice Pres. in charge of Trackmobile development. The Trackmobile does work of a switch engine, moving as many as 6 fully loaded freight cars at one time. When traveling from job to job, rubber-tired wheels are lowered.

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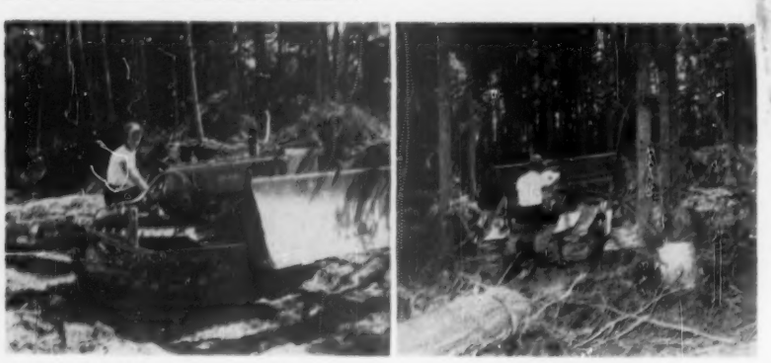
Right-of-ways for main electric utility lines through commercial timber stands must of necessity be wide enough to prevent possible line damage and resultant outages from falling trees. The purchased easement strips seem to run about 300 ft. in width. Productive area of timberland is diminishing by approximately 36 acres per lineal mile of utility right-of-ways through commercial forests.

This keeping of timberland out of production concerns the forest owner. One Pacific Northwest utility, Eugene



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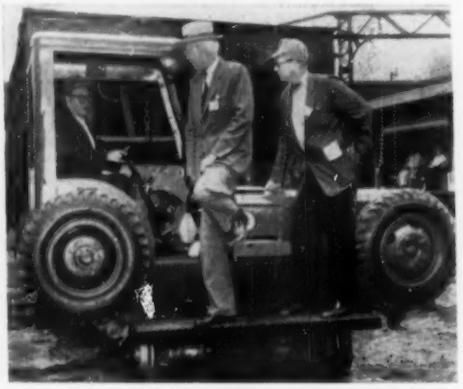

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Water and Electric Board, Eugene, Ore., has endorsed the idea of trading timberland to replace that put out of production by the right-of-way strip.

New Officers of Pusey & Jones

DANIEL M. PIERCE (left), is new Pres. and Gen. Mgr. of Pusey & Jones Corp., which has been building ships for 103 years and paper machines for 88 years. SAMUEL M. BRATTON (right) is newly elected Vice Pres. and Chief Engineer, Paper Machinery Division. He has been with P & J for 38 years. As announced in P & P in the Aug. 1955 issue, SIDNEY G. BRISCOE, a 20-year veteran with P & J is General Sales Mgr., Paper Machinery Division. RALPH JOHNSTONE continues as Vice Pres. and will handle special projects.

Morgan Tells Georgia To "Pay Price" For Industry

Rayonier Inc.'s president, Clyde B. Morgan recently told some 400 leading Georgia industry leaders that if Georgia is to attract new industries to the state it must "pay the price."

At the annual meeting of the Associated Industries of Georgia, Morgan—in what was described by one newsman as a "double-barreled bullseye"—claimed that unfavorable tax differentials weigh heavily on the cost of production for manufacturers. He added:

"They place Georgia at a disadvantage in obtaining new industries in competition with states having less burdensome tax laws."

He pointed out that when Rayonier built its $25,000,000 plant at Jesup, the corporation also paid out $400,000 in sales taxes just for materials for that plant. (A few days later, Georgia's Gov. Griffith, in obvious rebuttal, told a gathering that Georgia wanted to woo big industry to the state but would not change its tax structure to get them.)

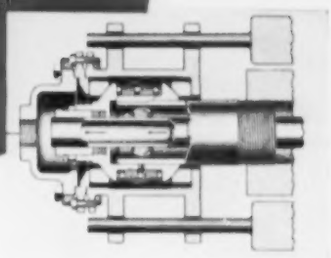
New Reliance Plant in West

Ground has been broken for a new $500,000 West Coast assembly plant of Reliance Electric & Engineering Co. in the Millsdale industrial area, Burlingame, Calif.

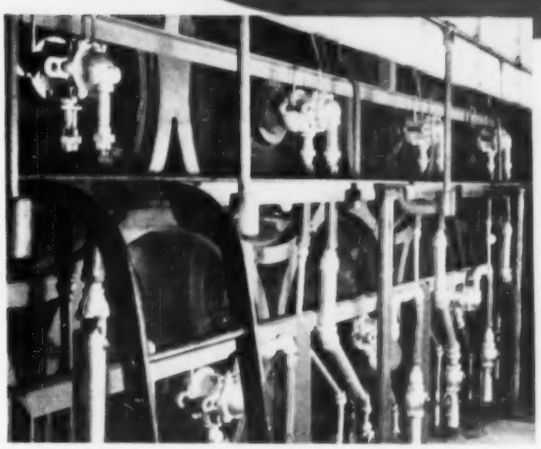
Facilities at Millsdale will be shared with Reeves Pulley Co. The plant will be some 10,000 sq. ft. in area, when opened March 1, 1956, with 2,000 sq. ft. for office space.

For paper machine dryers with rotating syphon pipes

Type LN JOHNSON JOINTS



Cross section view of Type LN. Inlet is in side of body; outlet can be as shown or with angle head as in installation views.

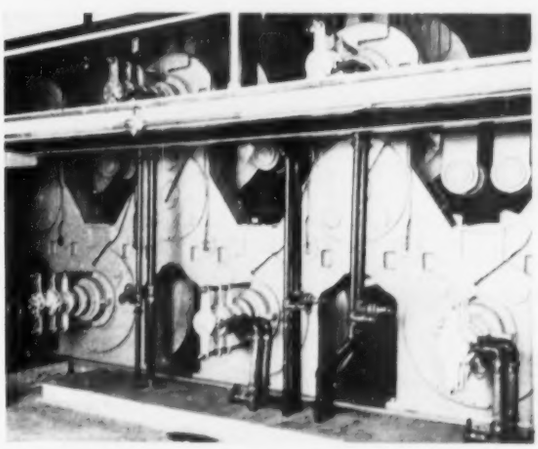


Type LN Johnson Joints on paper machine with exposed gearing. Support rods are hung from framing.

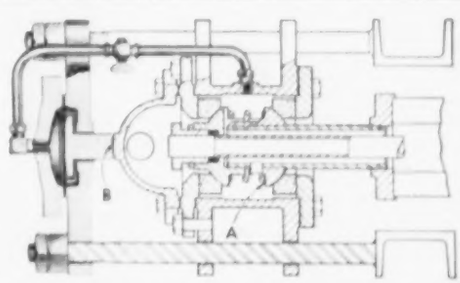
SYPHON PIPES that must rotate with the dryer roll require a specialized type of steam joint. The Johnson Type LN answers the problem neatly enough by accommodating the syphon pipe as an integral part of the rotating assembly. The pipe is still permitted longitudinal movement; the Johnson Joint requires no lubrication or adjusting.

The mounting of the Type LN provides a "floating action" that assures maximum service life. Simple rods, which fit into lugs cast on the joint body, carry all the weight of the body and connections. The sealing mechanism floats freely inside.

Months and even years of service without a bit of attention have proved the Type LN the best steam fit yet devised for this service. A trial joint installation can be arranged in your own mill, without any obligation on your part.



Type LN Johnson Joints on machine with enclosed gearing. Support rods are fitted to bosses provided by machinery manufacturer. Installation includes Compensators (see right).



The Johnson Load Compensator

Developed in response to increasing operating speeds and pressures. Teams up with the LN Joint; mounts on same support rods. Utilizes pressure within joint to exert a force against joint body, which in turn reduces friction load at the seal ring. Cuts power needs of joint in half; doubles seal ring life; slashes down time and maintenance.

Products of The Johnson Corporation

849 Wood St., Three Rivers, Mich.

Rotary Pressure Joints • Compressed Air Separators and Aftercoolers
Direct Operated Solenoid Valves • "Instant" Steam Water Heaters

HEADS UP. Guests duck (left) as Superchief ALAN BOYD supplied sound effects for presentation.
"THREE CHEERS FOR PAPER, Paper allows us to eat" sing Seminole-garbed Penjerdel Paper Peddlers (right) at Wake-Em-Up Breakfast. Group had all chiefs, with ALAN BOYD of Huyck Felts as Superchief.

How to Make Mills More Efficient

Penjerdel meeting in Poconos hears some surprising views on "too many meetings and reports"

How can you improve the efficiency of your mill?

A formula for this was presented by a provocative speaker at the annual fall meeting of Penjerdel, a leading division of AP&PMSA. The speaker, Frank Federici, head of Associated Industrial Consultants, took some lusty swings at pre-conceived popular notions about efficiency. He had some different ideas.

The Penn-Jersey-Delaware division of the Supts. Assn., meeting at Pocono Manor, Pa., broke attendance records for the second time this year under Chairman Clarence F. Kingston, paper mill supt., Hammermill Paper Co. There were 325 registered, including wives.

"Man by nature is not an efficient animal," said Mr. Federici. How to train him is almost a science in itself. Efficiency is not a state of high speed machines. True efficiency is a proper frame of mind—incorporating a proper balance of subjective and objective thinking. It is not someone else's job to recognize inefficiency. Any intelligent person can do something about it.

"Few persons use more than 10% of their latent knowledge. The average company is 50% efficient—why not 90%?

"Questions to ask concerning the efficiency of any operation: Can it be eliminated? Can it be simplified? Can it be combined? Can the sequence be changed or improved?"

One mill, he said, reduced downtime averages from 12 to 8 hours saving $200 to $300 an hour. "How many daily and weekly reports," he asked, "are necessary? Many are spending too much time in meetings. Meetings burn energy," he stated, "and take the most important people away from their jobs; leaving the training to subordinates."

Many questions were hurled at Mr. Federici. Replying, he said a good average in the paper industry, in terms of papermaking and labor utilization, is 70% to 80%. Efficiency falls down, he said, in the converting and finishing end to 50% to 60% because more people are involved.

Another comment by Mr. Federici: "Selling takes a lot more physical effort than working in a mill."

DR. SAMUEL L. GOLDHEIM (left), Director, American Bio-Chemical Co., Baltimore, Md.—"You don't have to make it so good, but make it uniform."
HUGH R. SUMNER (right), in charge of Pollution Abatement, West Va. Pulp & Paper Co.—"Covington Plant was successful from word go."

Efficiency should be measured in terms of finished salable product, he said. The machine should be charged with all waste. Most paper companies, he added, do not pay enough attention to causes of downtime and many do not keep adequate records of downtime. Downtime percentages are 8% to 10%—he said they should be 2% to 3%.

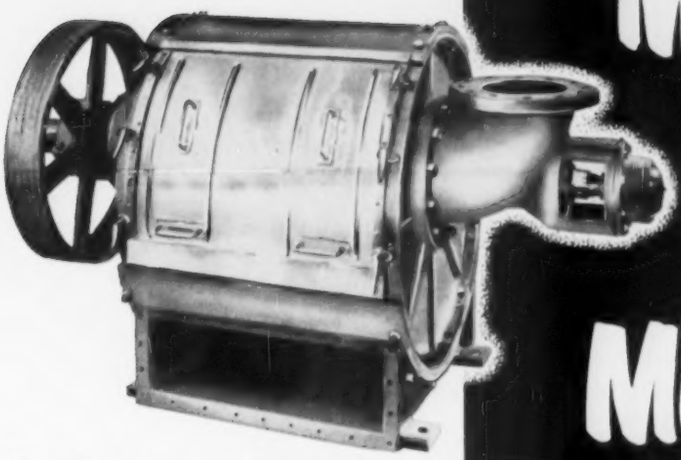
He opposed running clothing down to the last inch, if it means a shutdown at 2 a.m., with no mechanic around. He favored cutting the clothing and wires at a certain time.

Scott Paper Co. is on a scheduled basis for downtime. Mr. Federici said that one paper company noted that as clothing life went down, waste and steam consumption went up and roll life went down.

A sound movie showed actual contract negotiations between the Rogers Corp. and the union.

URGES INDUSTRY-SCHOOLS CO-OPERATION—Luncheon speaker Dr. J. Paul Mather, president of the U. of Massachusetts, appealed for better co-operation and understanding between education and industry. Education too, will have to make some changes, he insisted. He suggested abolition of summer vacations and school "swing shifts."

WHAT CONVERTER WANTS—"The converter wants uniformity more than any other quality from his mill



The "Junior" Screen . . . smallest of *three* units producing from 35 to 150 tons per day, respectively.

Money Saving Midgets

Cowan Centrifugal Pulp Screens by

APPLETON MACHINE COMPANY

Added efficiency, greater economy are the watchwords for *Appleton Machine Company's* junior versions of the standard Mark "A" Cowan Centrifugal Pulp Screen, acknowledged as outstanding in its field.

The Mark "E" Screen is a half-sized model of the standard Mark "A", conservatively rated at a capacity of 2400 U.S.G.P.M. accepted stock. 50 h.p. is required to operate the Mark "E", but its drive is designed to accommodate a 60 h.p. motor, wherever needed. The Mark "E" is particularly advantageous in smaller mills, or as a supplementary screening unit. Also, installing two Mark "E" Screens—instead of a single larger machine—provides a definite safety factor in case of breakdown.

The "Junior" Screen is a quarter-sized model of the big Mark "A", with a rated capacity of 1400 U.S.G.P.M. accepted stock. 25 h.p. operates the "Junior" Screen, but it will handle motors up o 40 h.p. Greatest applications are as secondary screening units, and as a primary screen for mills producing a variety of pulp grades which require a system made up of small, separate units.

Performance of these two Cowan Screens is comparable in every way to that of the standard Mark "A" Screen . . . the same high consistency screening . . . low percent rejects . . . good fiber separation . . . low shower dilution pressure . . . top hydraulic efficiency. Typically sound *Appleton Machine* construction plus a protective coating tailored to fit your needs *complete* your assurance of long-time satisfaction.

CUSTOM-BUILDERS OF PULP & PAPER MILL MACHINES
WINDERS • FINISHING ROLLS • REWINDERS

PENJERDEL 1956 LEADERS are (l to r): STANLEY B. HUSS, Sec.-Treas., Sales Representative, F. C. Huyck Co.; JOHN H. RICH, 1st Vice Chairman, Asst. Mill Mgr. of Riegel's Milford, N. J. mill; EDWIN OLMSTEAD, 2nd Vice Chairman, Exec. Vice Pres., The Eaton Dikeman Co.; CLETUS D. COFFMAN, Chairman, Supt., Chesapeake Paper Board Co.; and JOHN J. VERWAYEN, 3rd Vice Chairman and Chief Engr., Gibralter Corrugated Co.

FRANK FEDERICI (center) of Associated Industrial Consultants—"When you are through improving—you are through."

GETTING TO BE A HABIT (right) Two-time winner of Bolton Award, DON BIXLER of Riegel Paper Corp. (r) accepts Award from H. S. VAN PIPER of John W. Bolton & Sons.

supplier," said Dr. Samuel L. Goldheim, director of American Bio-Chemical Laboratory, Inc. "The converter doesn't want perfection. Converters have asked me to tell the paper mill that they don't have to make it so good but make it uniform. Converters believe that mills are lagging in their control of operations, are giving only lip service to quality control."

The ever present problem of stream pollution as faced up by West Virginia Pulp & Paper Co's. Covington mill was described by Hugh R. Sumner, in charge of pollution abatement. He said waste treatment plant has been successful from the word "go."

A movie on flood damage at Riegel Paper Corp's. Riegelsville mill, was taken by George Suydam's son-in-law between frenzied efforts to move his furniture upstairs beyond reach of the waters.

Another movie, commented on favorably, was that of the E. D. Jones & Sons Co. on papermaking.

The 1956 Spring meeting will be held in Baltimore, Md., in April.

Election winners and Golf winners at Penjerdel

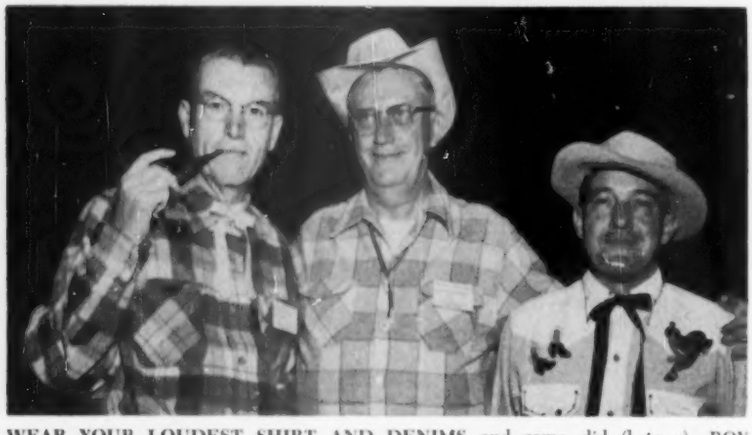
Fun day at the Penjerdel meeting was climaxed by an old-time Country Fair, at which loud shirts and denims were de rigeur for the men and gingham for the women.

Cletus D. Coffman, supt., Chesapeake Paperboard Co., was elected new chairman and celebrated by copping low gross golf honors with 91. John Rich of Riegel took low net honors. For the peddlers, Chester R. MacDonald of Flintkote Co. won with low gross of 87; Joe McTommoney of Moore & White Co. took low net. Another Riegel man, Donald H. Newcomb had the longest drive of 245 yards.

Penjerdel Paper Peddlers gave their 12th breakfast show. Dressed as Seminole Indian Chiefs, with Alan Boyd of F. C. Huyck & Sons, as the Superchief, they sang of the joys and woes of being a Penjerdel Peddler.

Present PPP members are Mr. Boyd; Dudley Nixon, Geigy Dyestuffs; Bob Hohman, Shartle Div., Black-Clawson; Jack Harper, Bagley-Sewall Div. Black-Clawson; Bill Taylor, Allis Chalmers; Joe Pacielo, DuPont; Al Hartley, Nopco; John Manley, Nalco, (he recently moved to Wisconsin); Bobby Greene, Waterbury & Sons; Don Hughes, R. T. Vanderbilt, and Tony Schettler, Reliance Electric, anchor man.

New first vice chairman for 1956 is John H. Rich, assistant mill mgr., Riegel's Milford, N. J., mill; Edwin Olmstead, executive vice pres., The Eaton Dikeman Co., is 2nd vice chairman; John Verwayen, chief engineer of Gibralter Corrugated Co., 3rd vice, and Stanley B. Huss, F. C. Huyck & Sons, secretary-treasurer.



WEAR YOUR LOUDEST SHIRT AND DENIMS—and some did (l to r): ROY TROUTMAN is Sales Manager—White Pigments for DuPont; CLARENCE H. KINGSTON, Chairman of Penjerdel Supts., is Superintendent of Paper Mill at Hammermill Paper Co., DON C. BOOTH is Manager of Southeastern Sales for DuPont.

Beloit Keeps Staff at New Pa. Plant

Harry C. Moore, president of Beloit Iron Works, has announced acquisition of the foundry and machine shop facilities previously owned by Downingtown Mfg. Co. Mr. Moore said that this entails plant and equipment only. Trained staff personnel will continue to work there, he told PULP & PAPER.

Business of Downingtown Mfg. Co. will not be continued by Beloit but operated by a new firm, Beloit Eastern Corp., with Wm. S. Wood, president, E. H. Neese Jr., executive vice pres. and treas., Alonzo A. Neese, secy., Harold E. Tower, asst. secy. and treas., and Horace Rodger, general manager.

Cliff Crawford To Talk At Ohio TAPPI Meeting

Cliff Crawford, president of Black-Clawson Cos., is to discuss the future of the pulp and paper industry at the Jan. 12 meeting of the Ohio Section of TAPPI in American Legion Hall, Middletown, O.

100% Soluble • 100% Stable • 100% Available

NALCO 680 is *completely* soluble, *completely* stable . . . the one sodium aluminate that remains in solution as sodium aluminate and does not settle out.

Every ounce of Nalco 680 provides active alkaline alumina . . . always available for rapid reaction. That means reduced alum requirements, lower acidity, better sizing, better retention, and therefore, better products.

Read the results reported at right — then ask a Nalco Representative to show you how Nalco 680 can repeat them in your mill.

BOX BOARD MILL — Power Savings

"Machine tenders report much better sheet formation with Nalco 680, and that jordans can be cut back 10 amps. Machines are cleaner with no deposits on cylinders."

KRAFT MILL — Alumina Retention

"Improvement in sizing, better retention of alumina, and general texture of the sheet using Nalco 680 are very marked. Converter reports the sheet handles better."

SULFITE BOND MILL — 45% Less Alum

"Results using Nalco 680 at the rate of 5 pounds per ton have been good. Improved sizing and reduced alum so that 140 pounds of alum is being added per 4500 pounds of furnish, instead of the previous 250 pounds of alum. This enabled the mill to meet rigid pH specifications for the paper."

TISSUE MILL — Clean Machines

"No. 6 paper machine remaining clean and generally good results through the use of Nalco 680 applied at the rate of four pounds per ton into the fan pump suction."

NATIONAL ALUMINATE CORPORATION

6213 West 66th Place • Chicago 38, Illinois

Canadian inquiries should be addressed to Alchem Limited, Burlington, Ontario

THE Nalco SYSTEM...Serving the Paper Industry through Practical Applied Science

New Mill Plans—Expansion Notes

• Many mills and companies have plans in works for additions, some still unannounced.

Checking a report published in Wall Street Journal and reprinted elsewhere, that Union Bag & Paper Corp. is planning to build a new mill, PULP & PAPER was told officially that this was premature, but the company is investigating the situation and probably will build some day.

Container Corp. of America has filed for a $35,000,000 debenture issue and this will be used if plans for a new paper mill, now in formation, are approved. Meanwhile CCA is going to expand on the West Coast with a boxboard plant in Santa Clara, Calif., and new carton plant in Seattle.

Brewton, Ala., may yet be the site of a new paper mill. It is favored as a possibility by many experienced observers. Engineers of a nationally known company were investigating. This is one place CCA may be considering.

MacMillan & Bloedel is going to double the size of its proposed newsprint mill at Port Alberni, B.C. Now it will have two newsprint machines, making 600 tons a day, instead of one.

Thilmany Pulp & Paper's board of directors approved a tentative study of a proposal for a new 165-in. Yankee Fourdrinier.

Even out in Deadwood, S.D., citizens have engaged James B. Potter to design a wet lap woodpulp mill. He is president of the 60-ton Cocomino mill, similar type, at Flagstaff, Ariz.

Coosa River stockholders okayed the new newsprint machine and $32,500,000 expansion at Coosa Pines, Ala. Creat Lakes Paper also got funds for a new 272-in. newsprint machine, now being built by Black-Clawson (Bagley-Sewall Div.). It will produce 300 tons per day of newsprint, operating in excess of 2,000 fpm, and increasing plant production to more than 800 tons per day.

Georgia Pacific Plywood made plans to go ahead with a 250-ton wood waste-based pulp mill at Toledo, Ore. Owen Cheatham, president, reaffirmed intentions of building a 500 ton mill near Juneau, Alaska, for which timber already has been purchased.

Japanese interests are expected to be the only bidders, through their Juneau company, for 5¾ billion ft. of Forest Service timber near Sitka, Alaska, which goes on the auction block Jan. 25. Another new Alaska mill is destined for the Wrangell area. With Ketchikan, now operating, Alaska will then have 4 mills.

President Folke Becker of Rhinelander Paper Co. pointed out to Security Analysts meeting in New York that the new mill jointly owned by Weyerhaeuser and Rhinelander is being built for two glassine machines. First one going in now is the world's biggest.

Dierks Lumber Co. has revived its plans for a mill near the Arkansas-Oklahoma line—this time for pulp, not newsprint.

Industry circles report that Rust Engineering, Pittsburgh, is asking quotations on equipment for Dierks Forests, Inc. (Formerly Dierks Lumber & Coal Co.) for its long projected mill near DeQueen, Ark. Reported site is over the state line in Oklahoma. Dierks has a creosoting plant at DeQueen, and its Oklahoma woodlands office is at Broken Bow, a short distance west.

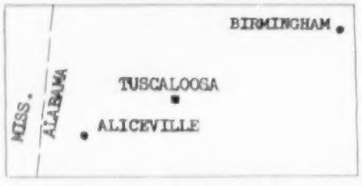
A major Middle West paper company also is planning another mill, location not specified. Still unannounced, there may be a 5th new newsprint machine in British Columbia.

Container Corp. of America has decided to build a $30,000,000 pulp and paperboard mill at Brewton, Ala., (300 tons a day initially) and has purchased a site there. Brewton, in the past year or two was seriously considered by other companies, which finally chose different sites, but it rated as one of the best potential new locations in the South.

Ebasco Services Inc. will supervise all engineering, design and construction. The mill will have a 216-in. (196 in. trim) Rice Barton Fourdrinier machine.

Western Plywood Co. is ready to build a $20,000,000 kraft pulp mill near Quesnel, B.C., as soon as it gets a forest management license, according to evidence presented to the Sloan Forestry Commission. It would be the first mill in British Columbia's interior. Western Plywood is headed by John Bene.

Another Supply Firm Picks Southern Site



New Site for Huyck Felt Mill

ALICEVILLE, site of mill, is about 40 miles from Tuscaloosa, and is on Tombigbee River. Its location is strategic to serve all Southern pulp and paper industry. Two mills are being built within 60 miles southward from Aliceville, Marathon's at Myrtlewood, Ala., and Gulf States at Demopolis, Ala. Gulf States' present mill is at Tuscaloosa and Coosa River is 30 mi. southeast of Birmingham.

• F. C. Huyck & Sons of Rensselaer, N. Y., manufacturers of papermakers' felts and industrial fabrics, has announced the taking of an option on a 200-acre site at Aliceville, Ala., on which it expects to build an ultra-modern, one-story mill, containing about 200,000 sq. ft. The company operates other mills at Peterborough, N. H., Cavendish, Vt., and Arnprior, Ont.

G. R. Holden, company president, said increased production capacity was needed to keep pace with the growing demand for Huyck felts and other industrial fabrics, to provide space for new products in development, to furnish better service in the South.

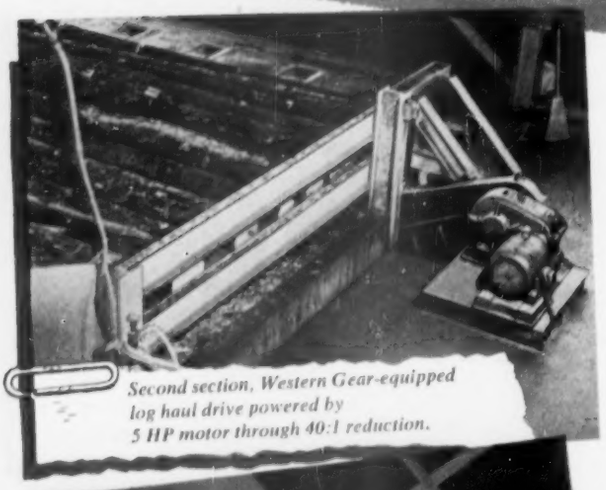
He noted that the South has witnessed a substantial, continuing increase in paper output over the past 26 years. Mr. Holden pointed out that in 1929, paper-producing capacity of 14 Southern states was 10.6% of the U.S. total, and by 1954 the figure mounted to 35%. Capacity soared 570% in the South, compared with 108% for the entire U.S.

Aliceville is approximately 40 miles from Tuscaloosa and less than 20 miles east of the Mississippi border. Another important point, the new mill, situated on the Tombigbee River, will have exceptionally soft water.

New Huyck Representatives

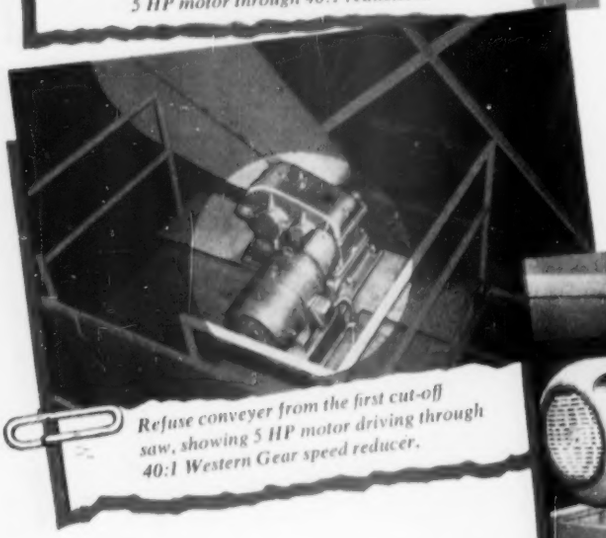
Stanley B. Huss (left) has joined the sales staff of F. C. Huyck & Sons, makers of papermakers' felts. He has been with textile and paper manufacturing since completing studies at MIT, Harvard and Boston Univ. Most recently he represented a wire works in the Middle Atlantic States. He will be assigned to the Middle Atlantic States to work with Alan R. Boyd, District Sales Manager in that area. Mr. and Mrs. Huss and four youngsters live at 2404 Merwood Lane, Havertown, Pa. JIM EVANS (right), has been appointed to the Field Service Engineering staff of F. C. Huyck & Sons. A graduate of Purdue, he was with General Electric and a wire cloth firm for 2½ years prior to joining Huyck. He has been assigned to the Southeastern states to provide technical felt service.

WESTERN GEAR
modernization pays off for Inland-Empire!

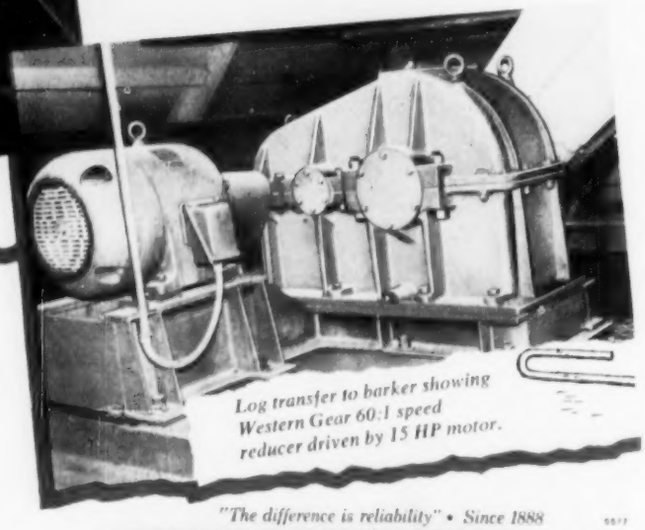


Second section, Western Gear-equipped log haul drive powered by 5 HP motor through 40:1 reduction.

Increased production with lower costs pays off for you in added profits when you modernize with Western Gear equipment. Inland-Empire Paper Company proved it when it called in Western Gear engineers to modernize its wood room. W. H. Rambo, well-known consulting engineer of Portland, Ore., designed the layout for the Inland-Empire mill and in collaboration with the mill staff selected Western Gear reducers for this important installation. Twenty-two Western Gear speed reducers and gear drives were installed. The immediate result was smoother operation and increased production. Down time now is virtually nil and maintenance has been reduced to a minimum.



Refuse conveyer from the first cut-off saw, showing 5 HP motor driving through 40:1 Western Gear speed reducer.



Log transfer to barker showing Western Gear 60:1 speed reducer driven by 15 HP motor.

Western Gear engineers, backed by 67 years of experience in designing and manufacturing speed reducers, gear drives and other equipment especially adapted to pulp and paper mill installations, can show you how you can reduce operating costs and increase profits. Call on them for recommendations on modernizing or installing new equipment. They'll be glad to help, no obligation. Write General Offices, Western Gear, P.O. Box 182, Lynwood, Calif.

"The difference is reliability" • Since 1888

WESTERN GEAR Corporation
ENGINEERS AND MANUFACTURERS

PLANTS AT LYNWOOD, PASADENA, BELMONT, SAN FRANCISCO (CALIF.), SEATTLE AND HOUSTON – REPRESENTATIVES IN PRINCIPAL CITIES

PULP & PAPER — What's New in Canada's No. 1 Industry

BOWATERS TO SPEND $5,000,000 MORE – Bowater's Newfoundland Pulp & Paper Mills has announced a new expansion program calling for expenditure of some $5,000,000 including speed-up of one newsprint machine.

A 284-in. machine will get a new press section and pressure headbox. The machine drive is to be replaced. Immediate objective is a speed of 2000 fpm and a 25% increase in production, but all the new sections are designed for 2500 fpm. A new Beloit winder is on order.

A tenth digester and an additional line of digesters will be provided. An overloaded chip system and the groundwood screening system are to be modernized. Screens on older paper machines will be replaced. Automatic finishing and wrapping equipment will be installed. Experiments with high yield sulfite pulping are to be pushed.

Target of the program: To achieve daily output of 1,100 tons of paper and 160 tons of market sulfite. Some older paper machines averaging 1,300 fpm are to be gradually stepped up towards 1,650 fpm.

A new heavy-duty Kamyr press will be installed on the pulp machine, increasing production of 20 tons.

TO BUILD NEW MILL–Sidney Roofing & Paper Co., Victoria, B. C., subsidiary of E. B. Eddy Paper Co., is planning a $5,000,000 mill near Vancouver on a 55-acre site on the Fraser River.

WHY NEWSPRINT PRICES ROSE –Continually rising costs of production and expansion necessitated by increasing demand for their product finally caught up with Canadian newsprint manufacturers and prices were generally increased (see editorial on page 4).

As was expected, the price increase touched off a round of protests from government offices and publishers. The U. S. Department of Justice launched an inquiry. Spokesmen in Ottawa said that the Canadian government would be more receptive to U. S. complaints about newsprint

Get Full Bolton-Emerson Line

John W. Bolton & Sons Inc., Lawrence, Mass., U.S.A. announces Pulp & Paper Mill Accessories, Ltd., 6139 Cote de Liesse Rd., Montreal, has been licensed as full line sales reps for Bolton and its Emerson Mfg. Co. in East Canada. Above are three P & P Mills Accessories staffers (l. to r): TOM CARROLL, CHARLES MAASE, Sales Mgr., (and son of Pres. B. A. Maase), and SVEN GREENWALL. Their firm previously had part of Bolton line. Now Bolton, manufacturers of Claflin Refiners, Emerson Jordons and other stock preparation equipment, has expanded activities to manufacture Emerson Shower Pipe and large Emerson jordans in Canada.

prices if U. S. import charges on Canadian fine papers were removed.

Sir Eric Bowater, head of the Bowater organization, said the "appreciable" rise in costs of production during the past three years could not continue indefinitely to be absorbed by the mills.

ANOTHER CHEMICAL PLANT—A second major chemical plant in the Vancouver, B. C., area will serve the pulp and paper industry. This is Electric Reduction Co.'s $5,000,000 sodium chlorate operation. Hooker Electrochemical Co. has chosen a site in North Vancouver for an $11,000,000 chlorine-caustic soda plant.

NOW PLANS TWO MACHINES—MacMillan & Bloedel directors have decided on two newsprint machines, not just one, doubling capacity of the mill now under construction at Port Alberni, B.C. President B. M. Hoffmeister says by middle 1958 the two machines will be producing more than 600 tons daily. First unit, a Beloit 275-in machine, will be running in first half of 1957. Second unit will include an additional grinder and screen room and additional machine room with a large high-speed four-roll newsprint machine.

The newsprint mill will use sulfate pulp base, a large proportion produced at Alberni by a Kamyr ClO_2 bleach system. Pulp capacity of 235 tons unbleached sulfate is to be increased to 335 total. It is understood 200 tons will be bleached. Other new equipment includes Rosenblad heat exchangers, Lundberg-designed hydraulic supply evaporator made by Hydraulic Supply Co., Seattle, and Impco-Sherbrooke washers.

EXECS MEET IN WEST—Members of the executive board, Canadian Pulp and Paper Association, who crossed Canada in late October to attend a conference with Pacific coast associates in Vancouver, B.C., included E. Lorne Goodall, president, Dryden Paper; Richard Collins, vice pres., Consolidated Paper Corp., Arthur P. Jewett, vice pres., Abitibi; R. M. Fowler, president of the association; H. M. S. Lewin, first vice pres., Bowater's Newfoundland; W. H. Palm, vice pres. and mgr., Hinde & Dauch of Canada; C. H. Sage, president of Spruce Falls, Arthur A. Schmon, president of Ontario Paper; R. W. Fannon, Marathon Corp., G. T. Cockerill, vice pres., Bathurst Power & Paper; J. W. Paton, pres. and mgr., Canadian Overseas Paper Co., and David Young, secy., Dryden Paper.

Ken Fosse Joins Canadian Wood Pulp Corp.

Ken O. Fosse, for over 15 years a woodpulp sales representative for mills in Middle West U.S.A., has joined the new Canadian Wood Pulp Corp., as announced by Eddie E. Barrett, president.

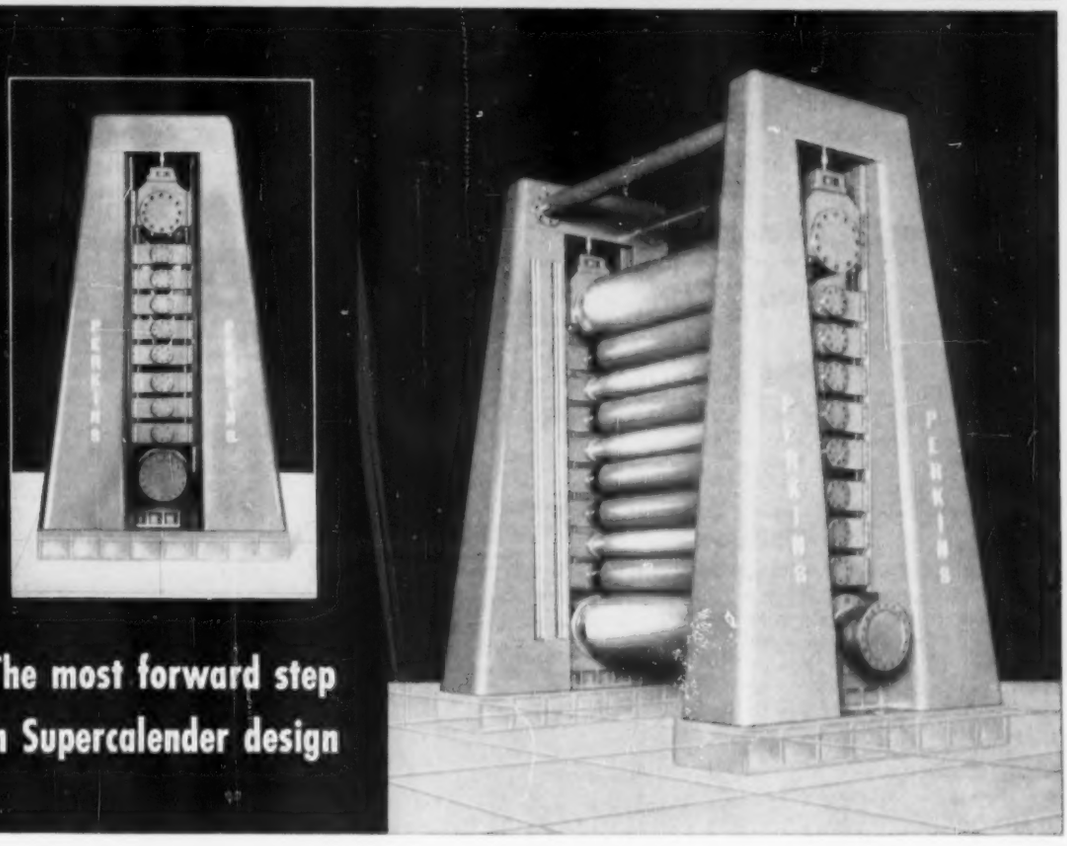
Mr. Fosse will represent the company in the Middle West, based in new offices at 919 No. Michigan Ave., Chicago (Mohawk 4-4566). Mr. Barrett's offices are at 444 Madison Ave., New York (Plaza 3-2622). The company handles Great Lakes Paper Co.'s market unbleached sulfite.

Mr. Fosse came from the West Coast, where he worked in Rayonier's Shelton, Wash., mill for 7 years and was with The Northwest Paper Co., Cloquet, Minn., about a year, before entering pulp sales in Chicago. He and Mrs. Fosse live in Glencoe, Ill., and have two sons.

Story of Pulp and Paper

A pictorial story of the pulp and paper industry, printed in four pages, is available by writing: Champion Paper, Public Relations Dept., General Office, Hamilton, O. Offering a variety of photographs, the 8½x11, black-white folder is of special interest to house organ editors.

PERKINS ANNOUNCES—
NEW SUPERCALENDER DESIGN



The most forward step in Supercalender design

The most modern and rugged design Supercalender ever built for super finishing—"Steady as a Rock"—frames and base of heavy fabricated steel plate sections, reinforced throughout—making possible speeds and pressures beyond present-day practices. Equipped with heavy Timken tapered roller bearings or SKF spherical self-aligning roller bearings. This new Perkins design is the most forward step in the design of Supercalenders in years.

All hydraulic pipe lines, oil lubrication lines and air lines will be concealed inside the calender frames, with easy access for installation of the pipe lines. The Calender will have double tee slots on each frame upright for rigid support of fly rolls, platforms or other members to be attached to the inside of the calender frames. Each Supercalender to have a roll removal unit for ease in removing the rolls endwise through the calender frame gaps.

B. F. PERKINS & SON, Inc. • HOLYOKE, MASS.

Southern Sales Office • 1609 Liberty Life Bldg. • Charlotte • North Carolina

EQUIPMENT AND SUPPLY NEWS

EDGAR PRODUCTS from MINERALS & CHEMICALS CORP. OF AMERICA are described in "Basic Properties of Edgar Paper Clays," a new booklet which gives full specifications and basic properties of all Edgar coating and filler clays. This includes full details on Edgar Spray Satin, the new, pre-dispersed, spray-dried coating clay, a development of fine fraction clays. Copies of the booklet are free, as are information and samples pertaining to it. Write to Minerals & Chemicals Corp. of America, 3 Station Place, Metuchen, N.J.

THE AMERICAN SISALKRAFT CORP., Attleboro, Mass., assisted by Kilham Engineering Inc. has developed an instrument to measure internal bond strength of kraft paper. The instrument is proving useful as a research tool for those concerned with the treatment of papers for specialized uses. The Sisalkraft Internal Bond Tester, as it is called, is in use at Crocker Burbank & Co., Fitchburg, Mass., and Brown Co., Berlin, N. H. For further information, contact Testing Machines, Inc., 123 West 64th St., New York 23, N. Y.

RELIANCE ELECTRIC & ENGINEERING CO. announces its new Reliance VS-100 Drive, a low cost tension regulating drive for center winding without any physical tie-in between the main machine and the winding section. Write Reliance, 1088 Ivanhoe Rd., Cleveland 10.

BLACK-CLAWSON CO. has acquired the complete line of Downingtown Mfg. Co.'s suction rolls and structural board forming machinery business. This new line will be added to B-C's diversified pulp, paper and converting machinery and will be designed, engineered and built by experienced Downingtown personnel who have accepted positions with B-C's paper and board machine div., Watertown, N.Y.

JOHNS-MANVILLE PRODUCTS HANDBOOK features 11 lines of its products for industry. Included are insulations and refractory products; Transite asbestos-cement pipe; packings and gaskets; electrical products; Celite Diatomite filter aids and mineral fillers; Celite Diatomite catalyst carriers and metal Raschig rings; J-M synthetic silicates; friction materials; pipe protection materials; floorings; and roofing and sidings. For a copy, write to Johns-Manville, 22 E. 40th St., N.Y.C. 16.

J-M also has a booklet on "Asbestos Safety Clothing" which includes details on asbestos suits, helmets, aprons, leggins, overshoes and the Wearbestos line of gloves and mittens. J-M has also recently announced a new line of synthetic calcium silicates, "Micro-Cel." Properties are absorption from 1 to 2.5 times its weight of liquids and still remaining a free-flowing powder. Further properties' information may be had from J-M's Celite Div.

TUBULAR PRODUCTS DIV. of Babcock & Wilcox Co. has a publication, "Eleven Ways to Avoid Boiler Tube Corrosion" containing data resulting from a study by its metallurgical staff. Ask for bulletin Tr-537. And—if you'd like B&W's chart showing approximate relation between hardness by various testing systems and tensile strength of carbon and alloy steels (covering hardness systems of Brinell, Monotron, Vickers and Rockwell) send request to B&W's Tubular Products Division, Beaver Falls, Pa.

DORR-OLIVER INC. announces promotion of CARLTON W. CRUMB to new post of director of technical data and CHARLES M. COMSTOCK to advertising manager. A 28-year veteran with Dorr-Oliver, Mr. Crumb was formerly sales promotion manager and Mr. Comstock was assistant. Mr. Crumb will be responsible for the dissemination of technical information for within Dorr-Oliver and associated companies abroad.

Dorr also announced a bulletin, "The Oliver Webwelder," describing physical characteristics, design features, principle of operation, applications and advantages of this new machine for the splicing of side rolls of paper. The Oliver Webwelder joins longitudinally up to 5 narrow webs to form a single finished roll of paper up to 85 in. wide. Write for bulletin to Barry Place, Stamford, Conn.

News About Chemical Linings; Opens Jacksonville Office

Left to right: MURRAY H. BENNETT, founder of Chemical Linings, Inc., Watertown, N.Y., and former President, is now Chairman of the Board, and will operate from new headquarters in Jacksonville, Fla.
TED E. DETCHER, former Vice President and Technical Director, is now President.
ELGIN A. BRANCHE, former Secretary and Treasurer, is now Vice President and Treasurer.
Alan T. Canham, a 1955 honor graduate of Stevens Institute of Technology, Hoboken, N. J., joined Chemical Linings as Sales and Service Representative.
Chemical Linings, Inc., announces opening of the new office in Jacksonville, Fla., at 317 West Forsyth St., Phone ELgin 4-8484. The engineering staff at Watertown has been increased to meet the demands of increased volume of business. Mr. Murray was married Oct. 19 at Mt. Carmel, Pa., to M. Evelyn Brunner, a graduate of Penn State College, and they will live in Jacksonville.

New Strefco Valve

FRANK B. MOFFETT, JR., demonstrates new alloy knife gate bonnetless stock valve "Strefco No. 100," by Streed Fabricating Co., Inc., P.O. Box 4551, Attalla, Ala. Yoke and hand wheel are cast iron, circular opening in seat plate permits welding overlay and lathe returning, end bells are fabricated from .165 in. material in choice of alloy, heavy seat and guide plates form body, inert-gas-shielded-arc-consumable-electrode welding is used. Streed specializes in corrosive resistant products including Transite, clad steels, high nickel alloys, etc.

DOW CHEMICAL CO. is now in commercial production of Dow Polyethylene 700 C, paper coating grade, at its new plant at Freeport, Tex. Commercial production of soda ash at this plant, 300 tons daily, is also made known by DONALD WILLIAMS, vice pres. and director of sales.

TIDLAND MACHINE CO., Camas, Wash., announces a service for engineering, designing and fabricating of paper machine equipment for West Coast paper mills and allied trades.

HERCULES POWDER CO. has a booklet with photographs and biographical briefs of the 48 men in its Paper Makers Chemical Dept. A total of 650 years experience in the paper industry are represented. Inside pages, printed on offset, contain an alkaline filler and were treated with Hercules' new alkylketene dimer sizing agent "Aquapel."

INFILCO INC. answers questions on design requirements of clarifiers and thickeners for a wide range of capacities and solids removal loads in its bulletin, "Infilco Clarifiers and Thickeners." Ask for bulletin W-800B-S-600-B from Infilco Inc. at Tucson, Ariz.

LODDING ENGINEERING CORP. recently acquired Bailey and Blendinger Co. of Union, N. H., manufacturers of machine knives. Products of the B&B Div. of Lodding Engineering Corp. include chipper and hog knives for pulp mills and paper knives for paper mills. C. S. CONNINGTON, Barre, Mass., will handle sales in New England; R. T. BARNES JR. of Burlingame, Cal., will cover the West Coast and W. E. Greene Corp., Woolworth Bldg., N.Y.C., the rest of the U.S.

GERMAN AMERICAN Trade Promotion Office has a 250-page guide to machines and products made in West Germany for the paper and printing industries. Get copies by sending 25¢ to above company, Room 6900 350 Fifth Ave., N.Y.C. 1.

SYNTRON CO., 659 Lexington Ave., Homer City, Pa., offers its condensed catalog No. 5510 containing data on vibratory equipment, feeders, conveyors, power tools, shaft seals, selenium rectifiers, diesel pile hammers, gasoline hammer drills, electric hammers, etc.

S. MORGAN SMITH CO., York, Pa., has issued the first half of what they say will be the most complete catalog of butterfly valves. Write for copy to Al Scherm, Fuller & Smith & Ross Inc., 230 Park Ave., N.Y.C. 17.

DRYER TEMPERATURE CONTROL HELPS PREVENT PICKING, CURLING, COCKLING—This new control for individual dryers has been developed by Stickle Steam Specialties Co. to improve paper finish and to help prevent picking, curling and cockling on all grades of paper. Tests were completed recently on machines making tissue, board, book and writing. Designed for use on first wet end dryers, the control automatically maintains desired temperature of each dryer by regulating temperature of steam inside the dryer. The control consists of a thermostatic pneumatic pilot controller, and diaphragm motor valve. A dial on the controller provides instant setting of any temperature desired.

The new control for individual dryers is illustrated and described in bulletin 560 available from Stickle Steam Specialties Co., 2211 Valley Ave., Indianapolis 18, Ind.

KUHN on GAW

Continued from page 78

ers to gripe about the teachers' being "paid for not working" during the summer.

With as much logic someone could ask that all executives be denied pensions from their companies on the ground that they constitute pay for not working. And they do! But the phrase offers no help in deciding whether 12-month pay for teachers, or pensions for executives, are desirable or not.

GLASS WORKERS' PACT CLARIFIES THE QUESTION—Since my talk in June, Libby-Owens-Ford and Pittsburgh Plate Glass have reached an agreement with the Glass Workers which throws the question into clear relief. Here 5¢ an hour is put into a separate account for each worker, who holds a vested right to this fund which he could otherwise have received in wages. A year hence another 5¢ will be added by the company, at which time the workers can decide whether they want it added to the fund or to their pay.

Each worker can draw from his fund when laid off or permanently discharged, when he quits or retires, and it can go to his beneficiary if he dies. However, he cannot draw from the fund for idleness due to discipline, slowdown, or strikes. (Mr. Wilson, please note. You don't have to oppose SUP because it might be used to finance a strike. Write a provision which prevents it.)

No conflict with state unemployment compensation is expected, since the fund consists of individual savings. (This description is based on "Business Week," Sept. 17, p. 166). If it would quiet anyone's conscience, I would recommend in addition that the worker's pay stub clearly show the 5¢ deduction.

QUESTIONS ADDRESSED TO RITER—I think it might help clarify the issue for your readers if Mr. Riter would answer the following questions in terms of the glass industry's plan.

1. Do you oppose a worker saving money while employed so he will have some when unemployed?

2. Do you oppose the employer making the collection and keeping the fund for him, particularly when to do so makes it unavailable in case of a strike?

3. If after a layoff the unemployed worker chooses to live for 2 or 3 months on his own accumulated savings before taking another job, should he be free to do so?

4. A question related to No. 3, do you have any objection to the American people taking part of their ris-

ing standard of living in the form of increased leisure rather than increased goods? (I think we could agree in advance that we both want people to know the nature of choice they are making.) If not, is there any reason why some of this leisure should not be taken between jobs rather than stored up till age 65 or taken during formal vacations?

WHAT ABOUT "CHISELERS?"— When we move from the glass industry's plan to the Ford-GM system we encounter a host of new complications, of a sort I suggested the NAM give advice about. But in essence we move from individual accounts to a pooled account. Instead of becoming personal saving the deduction from each worker's pay becomes, in effect, an insurance premium, against which he may or may not collect. This change gives rise to some additional questions.

1. Is the risk of unemployment of a nature which can better be handled by individual savings or through the application of insurance principles?

2. Some "chiseling" must be expected under almost any insurance— as when in auto collision the owner sometimes receives more from the company than the repair actually cost him. Do you feel the amount of chiseling under present public unemployment compensation plans is so large as to make those plans unworkable? Is it possible to provide safeguards in plans such as Ford and GM to keep such chiseling within manageable limits?

3. If chiseling occurs under a Ford type plan does the company or do the remaining workers suffer the direct economic cost?

4. As a general average, about what fraction of a breadwinner's normal earnings do you think he would have to receive as unemployment compensation (in conjunction with the normal procedures of filing for a job in order to qualify) in order to discourage job seeking on a large enough scale to have a serious impact on the economy? That is, in terms of Ford and GM, by how much do you consider 60% to be excessive and unsafe?

In order finally to focus on where and whether we disagree, if a company faces a demand for a Ford type of plan, would you recommend that it counter-propose and accept the type of plan in Glass? If not, would you recommend that Glass drop its plan? Do you urge Procter & Gamble, Hormel, and Nunn Bush to eliminate their plans?

Or do you agree with me that the problem is not yes or no, but when, where, and how, depending on individual circumstances?

S. JAY KNOWLES, Field Service Engr. for F. C. Huyck & sons, faces busy future in South, where Huyck's new Alabama felt plant is being built. (We are sorry he was erroneously identified last month.)

F. S. (Stew) Morgan, Wife, Die in Crash

Frederick Stuart (Stew) Morgan, former plant engineer of St. Helens Pulp & Paper Co., St. Helens, Ore., and more recently executive vice president of Fraser, Weir & Associates, international industrial engineering consultants, and his wife, Suzanne, lost their lives in the Nov. 1. United Air Lines crash near Longmont, Colo.

Mr. Morgan had an interesting and varied career in engineering in many parts of the world. During a considerable sojourn at St. Helens, he was in charge of an expansion program and engineering development.

In early 1955, he did management engineering work for South African Pulp & Paper Mills, near Johannesburg, So. Africa. Later he was in Spain, advising a mining company there on maintenance efficiency which was his specialty. He had also done engineering work for Canadian mills.

Key Men for Supply Firms

HAIGH M. REINIGER (left), is new Vice Pres. in charge of Sales for both John W. Bolton & Sons Inc. and its Emerson Mfg. Division, succeeding A. C. Clarke, retired. Mr. Reiniger attended Yale Forestry School and did graduate operations research at Johns Hopkins. He headed product divisions for U.S. Plywood and was Product Development Mgr. for Borden Co.

RICHARD S. BUCKLEY (right), is new Director of Sales and Technical Service for Lockport Felt Co. He has been Tech. Service Rep for Lockport for two years. He represented Lockport previously on the West Coast. Before that he was Supt. and Tech. Director of Fernstrom Paper Mills and had been with other Coast mills, including Weyerhaeuser, in his former home town, Everett, Wash.

Six Southern Mills Are Perfect in Safety

Six members of the Southern Pulp & Paper Safety Association have reported perfect records for the first half of 1955.

One of these, Buckeye Cotton Oil Co., Memphis, Tenn., a subsidiary of Procter and Gamble, in reporting a perfect record of no accidents, enabled its parent company to complete a "grand slam" in safety records in all its manufacturing operations. Buckeye employs 651,928 persons.

Other Southern mills scoring a clean slate for two quarters were: Scott Paper Co., Mobile, Ala.; Crossett Paper Mills, Crossett, Ark.; Rayonier, Inc., Fernandina, Fla.; National Container Corp. of Va., Big Island, Va., and Hammond Bag & Paper Co., Wellsburg, W. Va.

Crossett, into November, has completed more than three million man hours without an accident.

In woods operations, only two firms —St. Joe Paper Co., Port St. Joe, Fla., and The Mead Corp., Lynchburg, Va.—have perfect records.

Records of the SPPSA also show that one firm employing more than two million persons had an accident frequency rating of 17.97, reporting 38 accidents during the first and second quarter. Highest rating was 44.94.

In New England News

ALBERT E. BACHMANN (left), has been elected President of Missisquoi Corp., whose groundwood, food containers and board specialties mill is at Sheldon Springs, Vt. Mr. Bachmann has been with Missisquoi since 1936. For the past year he has been Exec. Vice Pres., and was Vice Pres. in charge of operations 9 years. He is a past Pres. of TAPPI and Vice Pres. of Supts. Assn.

DR. ROBERT J. VAN NOSTRAND (right), is now Administrative Assistant to Newton L. Nourse, Brown Co. Vice Pres. in charge of Sales, Boston. Since 1952, Dr. Van Nostrand had been Regional Sales Mgr. for Pulp and Solka Floc in the Midwest, with offices in Chicago, and he and family resided at Libertyville, Ill. A native of Milwaukee, graduate of Lawrence College and the Institute of Paper Chemistry, he joined Brown in 1943 as a Chemist. He was Research Coordinator at Berlin, N. H.; and spent two years in sales in New York.

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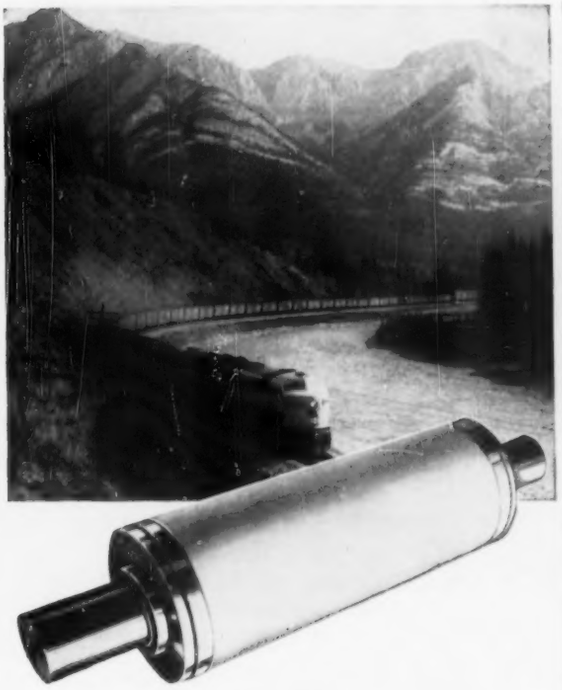

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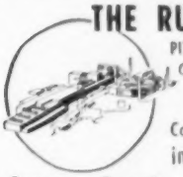
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